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ABSTRACT

During the report period the researchers were primarily engaged in the spring data collection and in drawing up the outlines of the 1971-72 and 1972-73 phases of the study. This activity involved a great deal of conceptualization and inspection of raw data, toward the end of clarifying the theoretical frame of reference and the purpose and procedures of further data collection and analysis of both the description and the evaluation phases of the study. The report includes six sections. Sally Kaminsky examines teachers' roles in different classroom settings or subsettings. Steve Lehane discusses teachers' and pupils' nonverbal behavior in different classroom settings or subsettings. The development of procedure for mapping the autonomous and integrated behavior of pupils is explored by David Jackson and Joseph Grannis. George Rand and Joseph Grannis discuss Preliminary Considerations for the Design of Evaluation Settings for 1971-72. Joseph B. Roberts discusses the Development of Children's Concept of School Learning Interview. Walter Furman and Peter Shaw describe a Questionnaire and Interview Study of the Social Context of the Classrooms Observed This Year. (Author/JM)

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THIRD PROGRESS REPORT

Contract No. OEC-0-71-059

May 1971

Period: 2/8/71 - 5/15/71

Institution: Teachers College, Columbia University

Title of Project: Autonomy in Learning: An Exploration of Pupils' and Teachers' Roles in Different Classroom Environments to Develop Criteria and Procedures for Evaluation in Project Follow Through.

Project Director: Joseph C. Grannis

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EPRATA

Columbia Classroom Environments Project
Third Progress Report May, 1971

Page 17, last paragraph, reads "idealized settings above, the convergent individualized order, divergent individualized order." Should read "convergent individualized order, divergent individualized order, and integrated order."

Page 18, second paragraph, reads "1 and 2 and spent their afternoon in a subsetting of 3." Should read "2 and 3 and spent their afternoon in a subsetting of type 4."

Page 51, second paragraph, reads "it is at least possible under highly dominative" should read "it is least possible under highly dominative."

Page 53, second paragraph, reads "children's accomplishment of tasks, with or without self-direction," should read "children's task accomplishments or productivity, with or without high self-direction."

Page 54, last sentence, reads "move", should read "more."

Page 57, number 17, reads "arbiter possible is some tasks" should read "arbiter possible if some tasks." Number 3, reads "low, moderate or fairly irregular of pupil's learning" should read "low, moderate or fairly irregular evidence required of pupil's learning."

Page 60, reads, "public forms and parliamentary forms of order" should read, "public forums and parliamentary forms of order."

Page 68, first paragraph, reads "contributing from the vitality of the program." should read "contributing to the vitality of the program."

Page 96, second paragraph, reads "statistically or methodically sophisticated" should read "statistically or methodologically sophisticated."

Page 100, second paragraph, reads "the Parent Work agreed over the phone" should read "the Parent Worker agreed over the phone."

3. Significant findings and events. "Findings" is not the most appropriate term to describe the results of our activities during this report period, since we have been primarily engaged in the spring data collection and in drawing up the outlines of the 1971-72 and 1972-73 phases of our study. However, this activity has involved us in a great deal of conceptualization and inspection of our raw data, toward the end of clarifying our theoretical frame of reference and the purpose and procedures of our further data collection and the analysis of both the description and the evaluation phases of the study. In this section of the Third Progress Report we will first summarize the thinking we have been led to and will then report on it in greater detail.

Overview.

Our conceptualization of the Knowledge and Social orders of learning environments has continued to grow. It will be recalled that the matrices described in the Second Progress Report resulted from our arranging the categories of Gump's setting descriptors and our own preliminary behavior stream code categories along hypothetical dimensions that, eventually, could each be ordered in a dominative to integrative direction. We see more clearly now that many more combinations of the original 25 specific dimensions could be analyzed than the 17 one-by-one combinations represented in the 17 matrices. We see also that some, at least, of the 25 dimensions do not fall as exclusively into a Social or Knowledge order as we at first supposed, and, furthermore, that a third general order, the Physical, needs to be distinguished from the Knowledge and Social orders of learning environments. Nevertheless, we are even more persuaded than before that in effective learning environments positions in the general

orders, and thus along the totality of the specific dimensions that might be identified, will tend to be complementary. The exemplar classrooms we are observing this year seem likely, in our final analysis, to evidence this combination, or, where positions on certain of the dimensions are not coordinated, to warrant scrutiny for disfunctional combinations.

Let us clarify at the outset a meaning of the matrices that might easily be misconstrued. "Effective" learning environments have been defined by us to be environments in which, with respect to both the knowledge and the social orders, teachers' and pupils' expectations and performance capabilities are congruent. This does not mean that one or another environment necessarily would be judged good by an external criterion. It does mean more, however, than just saying that an effective environment is efficient. Some form of accomplishment and satisfaction seems to be associated with each that we have observed, and one wants to know what these might be in order to make a judgment by an external criterion.

The question is more complicated than this, however. The different learning environments we are identifying through our matrices are not necessarily mutually exclusive. On the contrary, as one moves from the dominative to the integrated pole of the matrices certain aspects of each environment may be a foundation for the environments that follow, so that the more integrated environments literally integrate certain features of those that theoretically precede them. Does this mean that a child would have to pass through each environment in succession in order to function in the most integrated of them? If by this one means that the child must first spend a whole year or more, or even a month or more, in an exclus-

ively dominative environment, some would say yes and some no. The argument against this would be that an integrated environment could, theoretically, provide different levels of prescription or differently structured subsettings simultaneously, to match the expectations and capabilities of different pupils within the general setting or environment. In effect, this is the belief of some, at least, of the advocates of the "open classroom" or "integrated day," though it has certainly not been very clearly articulated. In any event, this articulation of different levels would undoubtedly be very difficult to accomplish, demanding as it would a highly varied repertoire of role possibilities on the part of teachers especially, but also from pupils. We shall be examining the Bank Street classrooms especially for the light they may shed on how differently structured subsettings might be combined, and, though not in a manner directly analogous to open or integrated day classrooms, we plan to construct our evaluation learning settings to include several levels of structure simultaneously.

There is still more to say about this problem. We sense much more strongly than we hinted at in the Second Progress Report that, in some way, different positions on our matrices relate to different developmental levels, not only of learning environments and teachers themselves, but of children as learners. Hunt's (1971) research on the question has especially stimulated our thinking about it, though we do not come out agreeing with his position entirely. Briefly, he has argued, and to some extent has demonstrated, that there is an optimal match, or, more precisely, an optimal mis-match, between the level of structure in a learning environment and pupils' entering conceptual levels, a developmental construct of roughly the same order as Kohlberg's. (Cf. Figures 1 and 2 on the

pages following, reproduced with Hunt's permission.) In two experiments that grouped junior high school students homogeneously according to conceptual level, Hunt obtained consistent testimonies from the teachers regarding the levels of structure, generally those he predicted, that seemed to be most effective for the conduct of their classes. And in a study conducted for an evaluation of Upward Bound programs, Hunt found that programs in which there was a better match between students' entering conceptual levels and program approach (more "structured" vs. more "flexible") were more successful in achieving Upward Bound objectives than programs in which these were less well matched. Very significantly, comparisons of programs alone, without taking into account students' conceptual levels, showed no differences in the attainment of Upward Bound's objectives.

We depart from Hunt chiefly in his assumption or conclusion that the revelation of this factor calls for homogeneous grouping of pupils in homogeneous learning environments. However, we do not mean to assert the opposite of this dogmatically, but to identify the issue of homogeneity for research. Grimes and Allensmith's (1961) research showing significant relationships between first grade pupils' compulsivity and anxiety and their success in relatively structured and unstructured (the latter a misleading term) reading programs is interpreted by us in much the same way. It argues strongly for the importance of matching, but not necessarily for the homogeneity of pupils and their learning environments.

This line of thinking suggests that we may need to modify our definition of "effective" learning environments to recognize the optimal mismatching or discrepancy between teachers' and pupils' expectations that both Hunt and Kohlberg argue for, i.e., a match that is, say, one

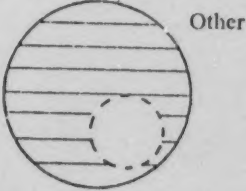
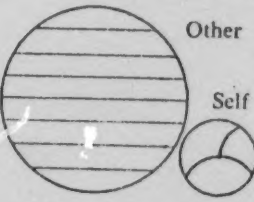
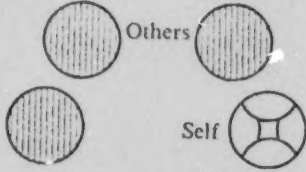
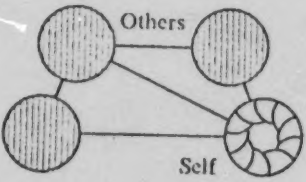
Stage	Self-Other Orientation	Stage Characteristics
Sub I		Self-centered, <i>unorganized</i> phase before incorporation of cultural standards
I		Learning the ground rules or <i>cultural standards</i> which apply to everyone
II		Learning about oneself and how one is <i>distinct</i> from these generalized standards
III		Applying these self-anchored dimensions to an <i>empathic</i> understanding of other persons and differences between them
IV		Placing the dimensions applicable to self and others into a meaningful, <i>integrated</i> relation.

Figure 1 / Developmental Stages in Interpersonal Orientations

Hunt, David E. (1971) Matching Models in Education. The coordination of teaching methods with student characteristics. Toronto, Canada: The Ontario Institute for Studies in Education pp. 20.

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Table 2 / Expected Outcomes of Stage-Environment Combinations

Present Stage	Environment	Match/Mismatch	Expected outcome
Sub I	Clearly organized within normative structure	Optimal	Open I
	Normatively unclear or inconsistent	Sub-optimal	Closed Sub I
	Emphasis on autonomy	Super-optimal	Closed Sub I
Open I	Emphasis on autonomy within normative structure	Optimal	Transition to II
	Clearly organized within normative structure	Sub-optimal	Closed I
	Highly autonomous	Super-optimal	Transitional arrestation
Stage II	Highly autonomous with low normative pressure	Optimal	Open II
	Clearly organized within normative structure	Sub-optimal	Closed II
	Emphasis on mutuality	Super-optimal	Closed II

Hunt, David E. (1971) Matching Models in Education. The coordination of teaching methods with student characteristics. Toronto, Canada: The Ontario Institute for Studies in Education pp. 22.

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but not more than one level in discrepancy. This would not, however, argue for changing the basic hypothesis that the knowledge and social orders of effective learning environments are complementary, or matched, since this has to do with the consistency of the role expectations for pupils in a given environment.

Obviously, our emphasis is strongly theoretical and predictive. Some might question the degree of speculation that we have allowed ourselves at this early stage of the study, arguing that this should be reserved until the conclusion of the study. However, both the description and the evaluation data is going to be extremely complex, and we will make no headway with it unless we have a clear idea in advance of the possible lines of cleavage in the data and ^{their} theoretical and practical significance. While we have been strongly guided by an ecological point of view to collect a broad range of data bearing on the school environments we are studying, we are not as willing as some to eschew a theoretical formulation of it. Partly this results, again, from necessity, and partly it is the consequence of the power that we have felt in the interpretation the Second Progress Report gave to our pilot data. Our assimilation of Hunt's thinking is possible because it is so consistent with that which we have developed independently. This is most immediately evident in the high correspondence between the successive learning environments characterized in Hunt's Figure 2, normatively unclear or inconsistent, clearly organized within normative structure, emphasis on autonomy within normative structure, highly autonomous with low normative pressure, and emphasis on mutuality, a progression that can be traced directly on the diagonal of our own matrices if one stipulates that the point of origin is pre-normative. We would substitute the term "prescriptive" for part of what Hunt means in the above by "normative", since norms are as equally

involved in a less as in a more prescriptive environment. Generally, however, Hunt's concepts support the validity of our own.

Validation of this sort has also come to us from another, quite unexpected, direction, a most provocative pre-publication copy of a recent paper by Basil Bernstein, "On the Classification and Framing of Education Knowledge." Bernstein addresses himself at the outset of this paper to the socializing function of a knowledge code, or the form of knowledge and the manner in which it is presented to students. He then distinguishes between "collection codes" and "integrated codes" of knowledge in terms that are remarkably consistent with our own distinction between dominative and integrative orders, including the epistemology associated with each, the affective emphasis of each, and other features. Two points in Bernstein's essay have especially moved our own thinking forward. First, he has argued much more forcefully than we had that the boundaries between different subject matters, between in-school and out-of-school knowledge, and between private and public knowledge, are more strictly drawn in the collection or dominative codes than in the integrated. This is instantly apparent in our own data, and has become an important focus for our further investigation. Secondly, Bernstein has pointed to a seeming paradox, that "the integrated code will not permit the variations in pedagogy and evaluation which are possible within collection codes." This would surely be paradoxical for us too, but is plausible enough to consider seriously. The rejection of conventional modes of evaluation by advocates of more integrated codes is well known, and indeed our experience in the project has been that an evaluation obviously designed to investigate the very qualities of learning prized most in integrated classrooms has been much more suspiciously regarded by these sponsors than

by the sponsors of the more dominative classrooms in the study. This perhaps has as much to do with the politics of education as with the theory of it, but that is not irrelevant to the matter of socialization and the politics of intervention programs. With respect to the pedagogical part of Bernstein's observation, it may well be that classrooms closer to the integrated pole of our matrices will be more similar than classrooms closer to the dominative pole, at the same time that their pedagogy is more complicated.

Bernstein's thought is moving, like our own, in the direction of questions about the kinds of access that the norms of different learning environments might give students, not only to knowledge as such, but to different ways of life and levels of society. Let us cite here one more source that has confirmed our thinking in the matrices, from still quite another direction. Blauner's (1966) thorough review of research on the conditions of occupational satisfaction establishes four principal contributions to men's satisfaction with their work. The first of these is the status ascribed to jobs by others. The second is control over certain conditions of one's work, especially control over physical movement, over the materials one works with, and over the pacing of the work, all of which Blauner characterizes as the "autonomy" of a person's work. The third factor contributing to satisfaction is the opportunity for mutual interaction or cooperation in one's work, and fourth is collegueship with others engaged in related work beyond the work setting. The second and third of these factors are most clearly related to variations we have identified in learning environments. Even the first and fourth might be related, however, to different authority relationships within an educational

setting and to different orientations to persons outside the setting respectively. When these findings from occupations research are added to those we cited in our original proposal, i.e., those stressing the priorities given to autonomy, consideration, and cognitive complexity in those occupations that are gaining in the economy, the case for examining children's education in these terms is very formidable.

We are quite aware that a major discrepancy between the values or norms associated with a given learning environment and the values held by parents of the children in that environment could be dysfunctional for children's learning. Our interviews with parents this spring have suggested to us the possibility that equally as important as the general value set the parents hold for their children and their education is the concrete images parents do or do not receive from the classroom, images that signal that parents' basic and potential expectations are being met in addition to objectives that may be beyond the parents' comprehension from their own experience. These matters too are illuminated for us by the matrices, and by the developmental interpretation that we are increasingly drawn to giving them.

We shall now turn to those sections of this overview that are more specifically related to each of the conceptual and design problems that have occupied us this spring in the project.

[Sections 'a', 'b', 'c', 'd', 'e', and 'f' in this overview correspond to Sections 'A', 'B', 'C', 'D', 'E', and 'F' below, the latter providing more of the details of our efforts during this report period.]

'a'. Teachers' and pupils' roles in different classroom settings (or subsettings).

Lehane has been carrying out a thorough analysis of the all day setting observation data collected by us in pilot study with a progressively revised version of Gump's setting analysis procedure. This analysis is still incomplete, and we have not yet begun the analysis of the spring setting data. Nevertheless, certain preliminary conclusions can be stated that suggest especially the significance of Kaminsky's study of teachers' and pupils' roles, the work that is discussed in Section 'A' below. The central problem addressed by Lehane concerns the validity of Lehane's adaptation of Gump's observation and coding procedure to the special requirements of our own project. In essence, the difference between the two methodologies is as follows. Gump kept a narrative log on a teacher's behavior simultaneously with photographing 2/3rds of the classroom with a camera set in a fixed position to photograph every 15 seconds, and then coded the data after its collection. We made the round of a classroom once every 5 minutes, coding immediately each subsetting encountered during each 5 minute round. Videotapes of selected subsettings were made during this time, but were not consulted for the original coding. The basic reasons for our turning to this procedure were (1) that we anticipated that, in the more complex classrooms we were visiting, we could not orient as directly as Gump to teacher behavior for the norms obtaining in a classroom at a given time, (2) we could not have more than one observer without overloading the observer without overloading the one setting/observer capacity of a classroom, and (3) videotapes of a whole classroom covered by three cameras simultaneously (the strategy originally employed by us before adopting the present strategy) did not provide the information needed to make reasonably accurate subsetting.

judgments. The obvious question is whether our procedure adequately characterizes the subsettings of our classrooms.

Our tentative conclusion, in brief, is that the procedure in its present form is valid for more dominative classrooms but becomes increasingly less valid for more integrated classrooms. Our procedure did indeed reveal systematic basic differences between pilot study classrooms, and relationships within them.* Nonetheless, the categories used to code the data become progressively less adequate to represent behavior patterns as the patterns themselves become more differentiated, or flexible, or changing, or constructed, as we would characterize them toward the integrated pole of the matrices. "Watcher-Helper," for example, a teacher role category borrowed from Gump's system, simply is too gross to describe the forms that this can take in a more integrated classroom. In the Bank Street classroom observed in the pilot study we did find it appropriate to code some teacher behavior patterns as recitation leader, some as supervisor, some as watcher-helper, etc., but, at the least, it is the 34% of pupil occupancy time coded "watcher helper" that itself is too indiscriminate. This applies in some degree even to a more dominative teacher role category like "recitation leader", in so far as the substance of the teacher's behavior might be oriented more to, say, eliciting facts or synthesizing the activities of the day.

If only the verbal content of interactions varies, but the direction of the interactions, the number of pupils involved, the physical movement and object patterns, and so forth, remain the same, we might qualify a category by a content analysis but would be quite hesitant about dividing it further. However, when the variations in the category are more struc-

*(See the Second Progress Report, especially Tables 1, 2, 3, and 4 following page 63)

tural, then we have a problem of a considerably larger order.

These comments apply equally to pupils' roles, and the Pupil Activity categories we borrowed from Gump and supplemented proved even less adequate to discriminate patterns in the data.

For the time being, at least, our revisions of the Pacing and Group Quality categories, described in the Second Progress Report and employed by us in the data collection this spring, are more satisfactory. The Materials Complexity categories devised by us may yet work, but our knowing this awaits a revision of the pilot data analysis. Further progress with the setting analysis thus depends most of all on our scrutinizing teachers' and pupils' roles. Like Gump, Kaminsky has elected to begin with teachers' behavior, recorded by us not in a log but in the all day behavior stream observation we have made of the head teacher in each classroom we visited, and supplemented by a wireless microphone recording of the head teacher throughout the same day and videotapes of selected subsettings that included the head teacher. Kaminsky has distinguished between primary and secondary roles that seem to be enacted simultaneously or alternately in the individual's behavior in a subsetting. One might speak here also of "proximal" and "distal" or subsetting specific and nonspecific roles, to refer to their immediacy in space and possibly time as opposed to their priority in a set of values. Kaminsky has also raised the question of manifest and latent functions that might be recognized in behavior patterns, for example, as the knowledge or social functions of behavior were more manifest or latent. Starting with an analysis of teachers' roles, Kaminsky proposes to work toward the reciprocal roles implied for pupils in one or another subsetting and the setting generally. The results of this analysis should eventually lend

themselves to comparison with results obtained from working in the opposite direction, especially the results of the non-verbal behavior analysis discussed in Section 'B' and the pupil behavior mapping discussed below in Section 'C'.

'b'. Teachers' and pupils' non-verbal behavior in different classroom settings or subsettings.

This focus too has developed out of the setting analysis, and has been identified by Lehané for analysis of our videotapes this summer. The immediate occasion of his interest is the inadequacy of the Pupil Activity categories suggest above. However, Lehané had attempted during the setting observations last fall to make "pupil behavior" judgments analogous to the "on task"/"off task" judgments of individual behavior made by Gump, and found the judgments increasingly difficult, again, as the settings or subsettings observed became more differentiated and integrated. This latter problem, and how we are now handling it in our analysis of pupil behavior streams, will be discussed below in Section 'C'. Lehané's approach to the question of pupil behavior generally would concentrate more directly on the whole population of a setting or subsetting than either Kaminsky's or Jackson and Grannis's more behavior stream oriented approaches, but like these others would work inductively toward the new definition of patterns by analysis first at a micro level of behavior. An obvious advantage of Lehané's approach would be its independence of the content of speech that is very difficult to monitor in a setting observation, but this is only the negative side of his thinking about the problem. The positive intent is to examine the affective quality of behavior in a setting, a dimension that is totally ignored in our present setting observation procedure. At this point,

Lehane has simply identified a promising literature of research on non-verbal behavior. However, his interest intersects with our suddenly heightened awareness of the affective significance of the Physical Order of learning environments, brought about by Professor George Rand's joining the project to consult on the design of our evaluation settings for 1971-72.

'c'. The development of procedures for mapping the autonomous and integrated behavior of pupils.

We put aside this spring the further development of the matrices as such while we returned to the problem that led to the matrices, the formulation of codes for analyzing individual pupils' behavior. First, let us recall that in the original proposal for our research, we sensed that some quality of pupils' learning performances in addition to autonomy needed to be considered. We at this time called it "adaptiveness", and in the Second Progress Report we shifted to speaking of "cooperativeness." Since then we have read the obvious clue in our matrices and have come to speak of "integration" as a quality that needs, equally with autonomy, to be a criterion for the evaluation of children's learning. Autonomy and integration may be as closely related as differentiation and integration, and this simile has guided much of our recent thinking about their relationship. Still, we do not yet understand the question clearly enough to argue that they have this relationship, and thus we have been working toward an understanding of it by thinking about indices of autonomy and integration separately.

Jackson and Grannis have taken the lead in beginning the development of these codes, which they have recently reconceptualized as "maps" of relationships in pupils' behavior. They first identified 7 aspects of

performance in a learning activity that might be coded for autonomy, and attempted to develop a code for each: initiation, materials acquisition, information acquisition, operations routing, termination, motivation, and social control. For each of these aspects different setting conditions ranging from most to least prescriptive were identified from the matrices, and then a hypothetical range of non-autonomous to autonomous behaviors was developed for each subset of conditions. The paradox that this yielded was that the codes proliferated like the brooms of the Sorcerer's Apprentice and yet at the ^{same} time were inadequate to deal with the complexity of the behavior in our behavior stream records. Jackson proposed that the codes be combined in a scheme designed to map either rote learning, at one extreme, or complex problem solving, at the other. The scheme as now envisioned is intended to be capable of keeping track both of changes in subsetting conditions during a given learning activity and of relationships between the several aspects of the learner's performance that are to be judged from the standpoint of autonomy. This scheme, discussed below (Section C), is still in a crude state of formulation, but promises to lend itself to a sophisticated computer analysis of the probability of occurrence of different patterns of learning in time under varying setting conditions and for varying populations.

Independence of, or control over, accomplishment seems to lie at the heart of both the scheme indicated above and Beller's (1955) criteria for rating the independence of young children's school activity, taking initiative, trying to overcome obstacles in the environment, trying to carry activities to completion, getting satisfaction from work, and trying to do routine tasks by oneself. This way of conceptualizing autonomy

or independence seems to be a consequence of looking especially at the control of activities over time, and thus tends to focus on clearly goal oriented and problem solving behavior. Let us characterize our first scheme as an analysis of the autonomy of activity in time, and then note that time is only one of six foci or realms of autonomous relationships that we have identified, time, space, objects, persons, self, and knowledge. These, of course, interpenetrate one another, so that all six are involved in the conduct of activity over time. However, we have concluded that it will be necessary for us to develop a separate mapping scheme for each, so that we can do justice to the relationships of each realm or focus. As in the case of activity over time, the inadequacy of separate subcodes for the autonomy of different aspects of behavior in space, or subcodes with respect to objects, etc., has driven us in every case to the mapping idea. Likewise, we are attracted by the promise of being able to determine the probabilities of different patterns of behavior for each focus under varying subsetting conditions and for varying populations. We have given thought to each of the five foci of relationships in addition to time, but will have developed the draft of only one additional of these five mapping schemes for submission with the May 31, 1971 proposal for continuation of our project. The development and refinement of all six schemes is to be a principal activity of the project between July 1, 1971 and December 31, 1971.

So far in this discussion, we have alluded to these schemes only in terms of autonomy, but integration will equally concern us, and integration indices as well as autonomy indices will be constructed for each. In fact, it has been our thinking about integration that has led

us to the realms of space, objects, persons, self, and knowledge, and our thinking about differentiation in relation to integration that has led back to autonomy. *

These mapping schemes are to be developed principally, or in the first instance, for use in our evaluation next year of the learning activity of children from different Follow Through programs in controlled settings designed by us. The map of learning activity in time, or problem solving, presumes behavior stream observations, and will be used this summer and fall for a major part of our analysis of the pupil behavior stream observations recorded this spring. The space, objects, persons, self, and knowledge maps may be only partially adaptable to the data collected this year, and even the problem solving map will require some data, on the materials and information available to pupil at a given time, etc., that we have not been able to collect in full this year. Thus we shall be considering concurrently with the development of these schemes the observation procedures to be employed in the evaluation settings.

'd'. Preliminary considerations for the design of evaluation settings for 1971-72.

We will discuss below the issues involved in housing controlled learning settings in an adapted school classroom or in a mobile van, both of which we have been exploring this spring. Let us suggest here, for elaboration below, the general characteristics of the learning settings we currently envision. As in virtually every aspect of the project this spring, the matrices have played a crucial part in conceptualizing the evaluation problem. The reader is asked to imagine with us five idealized settings as follows:

*It appears, paradoxically, that the concept of autonomy is likely to be defined only at subautonomous or mechanistic levels, unless integration is considered with autonomy.

- | | |
|-------------------------------------|---|
| 0. No order. | Learning criteria, teacher role, group quality, pupil role, pacing largely unpredictable. |
| 1. Dominative order | Individuals expected to conform alike to learning criteria, highly dominative teacher roles, class and section group quality, highly submissive active and passive pupil roles, pacing external. |
| 2. Convergent individualized order. | Individuals expected to conform alike to learning criteria, supervisory and tutorial teacher roles, cluster and alone group quality, subautonomous pupil roles, combination and individual pacing. |
| 3. Divergent individualized order. | Learning criteria different for different individuals, tutorial and facilitating teacher roles, group quality contain of alone and spontaneous groups, autonomous and sharing pupil roles, individual and short-term mutual pacing. |
| 4. Integrated order | Mutually defined learning criteria, facilitating and participant teacher roles, group quality fully differentiated and integrated, facilitating and participant pupil roles, individual and short- and long-term mutual pacing. |

The zero setting suggested above stands at the point of origin of the matrices and represents a hypothetical classroom where no norms of learning have been established. Settings 1, 2, 3, and 4 can be located at successively farther positions along the diagonal(s) of the matrices, the dominative-integrative dimension. The Englemann-Becker, Bushell, and Bank Street classrooms in which we have observed so far have included subsettings that corresponded roughly to one or another of the above positions, but none of these, or perhaps any naturally occurring, classrooms fully conforms to these types as we have idealized them.

We will propose to create, in a single replicated setting, subsettings corresponding as closely as possible to each of the last three idealized settings above, the convergent individualized order, / The chief reason for not trying to create a subsetting 0 is that it would not be a productive or healthy setting for the children being observed. The

chief reason for not creating a subsetting 1 is that, as a highly coercive environment, it allows for very little differentiation of individuals for observation purposes, especially where children are concerned, since children tend in this setting to conform or to withdraw passively by comparison to adults. This is not to say that there is no appropriate occasion for dominative conditions in a learning environment, but rather, again, that these conditions would not be appropriate for observations to determine differences between individuals.

We can imagine an all-day setting, lasting for two weeks or longer, in which children divided their morning time between subsettings of types 1 and 2, and spent their afternoon in a subsetting of 3. If we were observing children whose prior school experience had been exclusively in one or another of the setting types, 0, 1, 2, 3, or 4, we would offer some rather precise predictions about how different children would conduct their learning in several evaluation subsettings. Especially if the evaluation subsettings were somewhat less than maximally coercive in the environmentalists' sense of coercion (the coercion possible diminishing, of course, from type 1 to type 4), or less than optimally reinforcing or supportive, we would expect to observe children with type 3 and 4 school histories adapting, over the short term, significantly better (in terms of autonomy and integration) to the 4 subsetting than children with type 0, 1, and 2 school histories; children with type 2, 3, and 4 histories adapting better to the 3 than children with type 0 and 1 histories; and children with type 1, 2, 3, and 4 histories adapting better to the 2 than children with type 0 histories. To the extent that we could specify correspondences between different Follow Through or comparison classrooms and different

types or combinations of types, we would be able to predict the autonomy and integration of children from these classrooms in the evaluation subsettings accordingly.

This is a highly abstract and hypothetical statement. It is meant to represent our conceptual frame of reference rather than the concrete world, but thereby to indicate the kinds of predictions we are prepared to risk in order to make our analysis of the data more meaningful.

'e'. Development of a Children's Concept of School Learning Interview.

Closely allied to the above thinking is another train of our thought that this year/has resulted in a preliminary form of a Children's Concept of School Learning interview, discussed below by Roberts. We expect at some time in the near future to be able to show correspondences between the norms associated with each of the 5 types of learning settings indicated above and the norms at each of 5 developmental stages of a concept of ideal self as learner. "Concept of ideal self as learner," however, is not the same as "concept of (own) school learning," the latter probably representing an interpretation of present experience as the result of an interaction between this experience and the individual's concept of ideal self as learner. If Kohlberg and Van Den Daele develop a developmental interview for ascertaining the individual's concept of ideal self as learner, we should be able to examine, through our own instrument, the nature of this interaction. It is our hunch that our own instrument, when we have completed its development, will predict better than the ideal self instrument a child's/^{immediate or short-term}adaptation to different learning environments, though this in no way distinguishes the theoretical significance or the long-range practical value of ascertaining the child's general level of ego-ideal development. The argument for this goes roughly as follows.

The 5 stages of development predicted by us for a concept of self as ideal learner would be stages completed only in adolescence or adulthood, and then only by some or a few. We have defined our prediction in terms of 5, rather than say 7 (Kohlberg) or 18 (Van Den Daele), stages, because of a strong coincidence between our reasoning from the matrices and Hunt's reasoning to 5 stages from largely independent sources. Of course, as Hunt does, we could relate our hypothesized 5 stages to Kohlberg's 7 or Van Den Daele's 18, or whatever new number Kohlberg and Van Den Daele stipulate for ideal self as learner. The intriguing problem that confronts one in any case is that norms associated with even the most advanced stages of this concept in fact govern activity in some primary grade classes, where the children's capacity to justify the norms in ideal terms is developmentally quite limited. Hunt, after all, found both stages (or levels, as he often refers to them) 3 and 4 of his 0, 1, 2, 3, and 4, almost entirely absent in the thinking of disadvantaged adolescents who were subjects in an experiment that prescribed levels of structure in learning environments in accordance with pupils' entering conceptual levels. These same conceptual levels would presumably be lacking as well in much younger children, disadvantaged or not, and yet, again, it is conceivable that young children can learn to function with autonomy and integration in a highly developed, i.e., integrated, learning environment.

We are speculating that an individual may progressively differentiate and integrate norms at the action level of his behavior in the order of levels 0, 1, 2, 3, and 4, in each of the major social institutions into which he is initiated in his lifetime, especially the institutions of his natal family, the primary school, adolescence cum secondary school, and adulthood cum marriage, occupation, and politics, the latter illustrating

that the process of initiation or socialization can begin at an earlier time of life than its full actualization, (cf. numerous studies of political socialization.) The child's experience in more or less integrated families and primary schools probably influences both the stage and décalage of his general concept of ideal self and of the ideal self as learner component of this concept. However, this experience probably also affects the child's immediate capacity to function effectively in one or another learning environment at more advanced levels than he can conceptualize ideally, (or abstractly, since these come to mean much the same thing as one moves through the stages.) Indeed, as Kohlberg has recently noted in the context of his studies of prison behavior, an individual's action norms can also be cast at a lower level than his norms for ideal self, reflecting his adaptation to the realities of life in the institution that contains him. Reasoning now to our conclusion, the child's action norms are more likely to appear in his description of his and his teachers' and peers' actual conduct in school. They should somewhat influence his responses to questions asking what children in his class are supposed to do, and they may fail to compete with his (presumably less developed) ideal-self reasoning when he is asked why the children are supposed to conduct themselves as they do or should do.

In short, we are attempting to develop an interview to assess children's concepts of school learning that will help explain children's transfer of norms from one learning environment to another and that can be used as a pre-intervention and possibly a post-intervention measure in the evaluation design for next year (construing the evaluation learning setting itself as an intervention.) We do not construe this instrument as a substitute for the ideal self instrument Kohlberg and Van Den Daele might develop, but are persuaded that the two are needed to complement one another.

'f'. Questionnaire and interview studies of the social context of the classrooms observed.

This spring the parents of most of the children in each of the observed classrooms have been interviewed, the local Follow Through staffs and school principals have been interviewed, and teachers and aides, both those in the observed classrooms and others in the local project, have been surveyed with questionnaires developed for teachers and aides separately. The instrument and procedures for all of this were developed by Furman, Oligario, and Shaw following an analysis of interviews conducted in the pilot study last fall.

Furman, and Shaw who joined the project this spring, have been principally responsible for the design and carrying out of the survey of school and project personnel, while Oligario has been principally responsible for the design and carrying out of the parent survey. These are reported on separately in Section 'F', below. However, Furman and Shaw will undertake the coding and main analysis of the parent survey data, which they comment briefly on in the conclusion of their part of this report.

As the statement below will indicate, this part of our study too, has been organized around the concepts of autonomy and integration. However, just as ecological theory has provided a framework in which to conduct and analyze our classroom observations, and developmental theory has informed our interviewing of children and our relating children's learning to different classroom environments, so organizational theory has provided a framework in which to examine the relationships among teachers, aides, parents, administrators, and project staffs, and the expectations each hold for children's learning in the classroom and the home.

The central questions we have addressed ourselves to from the beginning have focused on the relationships between teachers' and aides' beliefs and reported classroom practices and the ways in which they themselves have been initiated into and supported in the teaching roles that they enact, and the relationships between parents' beliefs and reported practices and their initiation into and support in the roles that they as parents enact. We are confident that our instruments are providing us with information that will cast light on these questions. We are just now beginning the process of writing code books for the open-ended questions in the questionnaire and expect to have made substantial progress with the analysis of the data late in the fall of 1971. We are aware that we have developed a capacity for further, still more pointed investigation of the issues this study encompasses, but we do not intend to plan such a study at this time unless it is solicited.

This study of the social contexts of the classrooms we have observed has already proved invaluable to us for the sheer contact that it has provided with the principal adults involved in the children's education and for the perspective they have given to our own questioning. Our sense of, especially, the values each classroom model might hold for different individuals or groups has underscored the importance of objectivity in our observation and interpretation of the environments of the children's learning, and has made this objectivity more attainable for us. We have also learned much that will be useful to us when we must articulate the evaluation settings in 1971-72 to and with the schools and communities of the evaluation subjects.

We shall now discuss in greater detail our progress with each component of the overall study.

A. Teachers' and pupils' roles in different classroom settings
(or subsettings).

Sally Kaminsky

Behavior stream observations on head teachers in the classrooms observed, supplemented by wireless microphone recordings of the head teachers' verbal interactions and by videotapes that include the head teachers, will be analyzed for the following possible relationships:

1. Over the day in what activities is the head teacher involved and what proportion of her day is spent in any one activity? The structure of her day vis-a-vis activities will enable us to compare differences among head teachers, and, by implication, programs, in the relative attention given the variety of concerns in a second grade curriculum, as well as to investigate the ways these concerns are organized for pupil behavior over the day. These concerns might be identified in terms of subject matter focus, or in more general terms such as environment design and maintenance, instruction, and nurturing. Since all of the classrooms have teacher aides or assistants, questions concerning the use of para-professionals in different programs can be asked. The head teacher, with the assistance of aides, has opportunities to use her time in ways that are different from the conventional teacher in a one teacher classroom. How this is manifested in the different programs under study, whether a head teacher's range of activities is constricted or expanded, and so forth, might indicate priorities that the various programs observe that are not overtly subscribed to in the program rationales. The data of this analysis can be compared with the self reports of teachers and aides on the questionnaires, although the latter will be identifiable only by program

and location rather than according to the specific classrooms of the teachers and aides responding.

2. Over the day what roles does the teacher assume, within activities and across activities, and what proportion of her day is spent in any given role? Are there relationships among the roles any given teacher assumes, that is, does a teacher tend to use a wide variety of roles depending upon the activity, or does she cluster her actions within a particular range of roles throughout the day?

3. In the above, the investigator's concern is with role enactment which has the quality of persistence, that is, an enactment which is maintained for a sufficient period of time to be judged as consistent with the teacher's intentions in a segment of activity. Within an activity, if more than one role is enacted does a relationship exist between such roles? An example of this can be stated as follows: If a teacher begins a segment of activity as a recitation leader, is there a tendency to move on to a role which is structurally similar (for instance, task regulator), and if so, what are the relationships between this kind of role transition and the social/knowledge conditions (group quality, pacing, etc.) existing in the classroom under observation?

4. An intriguing question arises concerning the persistence of manifest behaviors and can be stated thus far in terms of the underlying or covert function of roles in terms of expectations for pupil behavior in a classroom. This yet unformulated question hovers around the more general question: What is the teacher really doing? How does she think

children are learning? At present, signals for latent functions will be sought in attempts to understand teachers' ideas about pupils-as-learners.

5. Aside from the notion that manifest role behavior may have a latent function, there are other behaviors during the day which, while not persistent, are enacted by teachers in their contacts with pupils throughout the day. These, for the present, are being called secondary roles, and are sensed as important adjuncts to the primary roles which the teacher assumes. The notion is tied in with the ideas expressed by the ecological psychologist who sees the coercive nature of a setting upon behavior. Reducing this concept to a smaller arena, does the enactment of any given primary role constrain the options for other behaviors, that is, how much can the dominant role be maintained even though the teacher "steps out of role" or in what ways can she do so without jeopardizing her primary function?

6. The basic scheme for analyzing teacher behavior in terms of role taking leads to the larger issue of expectations for pupil behavior in schools. In what ways does the teacher make known to students the behaviors expected of them by herself or by others? How do children learn these expectations? How does the teacher keep or support children in expected roles, and handle those actions of children which deviate from such expectations? How much do these expectations reflect possibly general norms of schooling, how much do they reflect the nature of the specific intervention of the programs under study, and how much do they reflect the construction between teachers and pupils of a unique social system in the classroom?

7. Hopefully, this will lead to the development of a category system for pupil roles, so that analysis can be less unwieldy, and so that we might proceed to test the Meadian/social interactionist hypothesis which states that role enactment is a function of a process of reciprocal interaction. The development of such a category system will rely upon what data shows, in short, what are the children doing while the teacher is doing what she is doing, and how are they regulating their behavior in terms of the expectations which she makes known to them?

8. While a category system of teacher behavior and pupil behavior can be useful in describing the kind of interaction that occurs between pupils and teachers in classrooms, a far more important question arises when one considers how such interactions function to maintain a desired social system. How does the teacher tie the whole thing together and how do children learn to help maintain it? It occurs to the present investigator that there exist three ways (if not more?) of attempting to get at this kind of data. Firstly, every social system has some set of rules which have become ritualized, so that persons within the system can go about what they are doing unhampered by constant interpretation of their actions and the actions of others. While our data does not provide us with a basis for describing the construction of ritual in classrooms we do have an opportunity to observe its maintenance. Secondly, although the head teacher is involved in any of these classrooms in only part of the total activity throughout the day, we can look to ways in which she organizes decision making for the entire classroom, whether that turns out to be the way in which she keeps herself accessible to individuals within the classroom, or whether she has set in motion a system of bureaucratic procedures that

allow her to withdraw from accessibility. Such bureaucratic measures can be identified in the form of jobs to others (aides, pupils, etc.) or in the form of physical arrangements and props which explicate for pupils the behavior expected. A third way of integrating the classroom may lie in the manner by which the teacher rationalizes for pupils the activities in which she asks pupils to become involved, that is, how she explains to them (and to herself) the reasons they are there, and the basis she uses to justify what they are to do, etc. Such explanations are means by which the teacher legitimizes the actions of herself and pupils. The tying of the whole thing, the keeping of the classroom together, then, might be understood in the light of three kinds of events: ritual, bureaucratic actions, and legitimizing activities.

Preliminary analysis of the data on the teachers has revealed some interesting structural similarities and differences reflected in the behaviors of teachers during the opening part of the day. Let us begin with the unexpected observation that the teachers in what initially seem to be the most dominatively structured (Engelmann-Becker) and least dominatively structured (Bank Street) programs perform similarly, by comparison to the intermediate structured (Bushell) program teachers, in that they set up plans for the day in whole-class sessions with their pupils. Further inspection suggests the reasons for this similarity, and complicates what could otherwise be an overly simplified characterization of the programs.

In both the Engelmann-Becker and the Bank Street programs, while in greatly varying degree, pupils are expected at times throughout the day to pursue independent learning activities that will require little immediate attention from the teacher. In the Bank Street program, independent learning activities are expected for large segments of the day, as the

teacher engages in small group instruction or moves about the room making herself available in facilitating or tutorial roles. In the Englemann-Becker program individual work is clearly delineated as that behavior expected of the children while their teachers are largely engaged with other children in the mass recitations and teacher regulated tasks of the sections. Bushell children, indeed, spend much time working individually. However, in the Bushell program a teacher is always present for this activity, largely in the role of supervisor. Those segments of activity in the Bushell day when the teacher is relatively withdrawn can be identified mainly as the "spend" or "back-up" activities, which the teachers construe chiefly as play periods, rather than as periods of independent learning.

The opening session planning in the Engelmann-Becker classrooms included detailed explanations of the work materials the children were to use, with prompting toward social behavior expected while these tasks were being fulfilled. The materials had been prepared by the teachers in advance of class time and were written on work sheets or the blackboard. The opening planning session in the Bank Street classrooms tended to be less prescriptively detailed, to be more oriented to choices among activities for the children, and to involve the children themselves more in the physical provisioning and arrangement of the class. Also, the Engelmann-Becker opening session included more recitation, and the Bank Street more discussion, in line with the general emphasis of interaction in the two programs throughout the school day. As the Bushell instructional materials consisted largely of programmed texts or workbooks, this explanation to the class was presumably seen to be less necessary.

There were, to be sure, variations among the classrooms of each pro-

gram, and overlapping between the programs, which will be analyzed. For example, in one Bushell classroom the records show a setting which is more clearly an extended beginning of the Bushell day. Its procedures, however, are greatly different from the other programs' procedures. Firstly, the "plan" in which the teacher involves the children is a minimal and ritualized exercise in communication that sets down, almost as a record, the events which will take place that day (and all other days.) Statements from children such as "We will read," "We will do Math," etc., are hardly more than affirmations, perhaps more related to a traditional ritual of recording on the blackboard the subjects expected to be covered in a day than to anything inherent in the Bushell ideology. The rest of the beginning setting involves the checking of homework, and no evidence is available that the children engage in planning their subsequent activities for the day. Since all learning tasks are programmed and carried out under teacher supervision, no prior explanation is required for their execution.

Similarities and differences in patterns of behavior, then, can point to subtle variations in their functions, and imply the varied conceptions of the learning process that underly them.

B. Teachers' and pupils' non-verbal behavior in different classroom settings or subsettings.

Steve Lehane

The following remarks are the result of a quick inspection of some of the literature on non-verbal behavior, and depends especially on a review of the literature by Weeck (1968). They are not meant to be comprehensive or precisely directed at this juncture, but rather to indicate a type of analysis that can be developed both for the videotapes of this year's descriptive study and for the observation of behavior in the evaluation settings proposed for next year. Professor Rand's extensive experience in the analysis of non-verbal behavior in public spaces will especially influence the approach that is suggested here.

In analyzing the data from the setting categories it has become evident that the Teacher Role and Pupil Activity categories must be refined and related to many subtleties of classroom environments, particularly in the affective domain, although the Teacher role categories used to date have related quite systematically to the Group Quality and Pacing categories. The analysis of these subtleties requires a micro level of observation and recording. Unfortunately, most psychological theories or models employed in education research suggest only molar levels of behavior for observation of affectivity. However, the branch of psychology that concentrates on non-verbal behavior -- facial expressions, gestures, posture, body movement and distance, and extralinguistic speech -- suggests an approach that may prove fruitful for our studies.

The non-verbal approach is generally inductive. It directs researchers to observe specific forms of behavior which have been, or might be, demonstrated to be valid indicators of various psychological processes. The findings of a number of research endeavors which, in one way or another,

have used independent judges to establish the validity of non-verbal analyses are presented here for the project's consideration.

Teachers have been trained to use non-verbal cues to detect pupils' comprehension (Jecker, Maccoby, and Breitrose, 1965). Facial features have been used to distinguish between feelings of pleasantness and unpleasantness (Ekman, 1965), degrees of stress (Levanthal and Sharp, 1965), levels of conflict (Haggard and Isaacs, 1966), attentiveness and tension (Ponder and Kennedy, 1927), and to permit more accurate predictions of emotions than vocalization (Levitt, 1964).

Additional research has indicated that the upper half of the face is used to express positive emotions while the lower half expresses negative emotions (Coleman, 1949). Eckman's (1965) data reveals that while the head and face express the content of emotions the body expresses levels of arousal.

Exline and Wenter's (1965) work indicates that eye contact is a valid index of affiliation, comfort, and competitiveness. These researchers also found that different settings require different norms of eye contact and concomitantly different affective dispositions. Measures of Machiavellianism and eye contact rates have been found to possess high and positive correlations (Exline, 1961).

The body movement research conducted by Allport (1961) has resulted in the following classification: (1) body movements made for the purposes of coping, and (2) body movements for the purpose of expressiveness. The former movements tend to occur more in structured situations or tasks, and the latter more in less structured situations.

The movement and position of hands appear to be used as defenses to conceal affective dispositions that are manifested by the face and

body. Mahl, Danet, and Norton (1959) have demonstrated that various hand movements correlate with the following affective dispositions: The need for reassurance and support, the need to expell disconcertion of thought, and the expression of frustration, anguish, anger, and shamefulness.

Scheflen's (1966) results indicate that body postures have three functions: (1) to maintain group inclusiveness and cohesion, (2) to reflect positive and negative feelings, and (3) to establish status distinctions.

Spatial behavior, the distance humans maintain between themselves, has been found by Hall (1964) to mirror various underlying psychological processes and also different cultural backgrounds. Esser et al (1965) have found that the use of space to establish territoriality in an open setting is correlated with dominant and aggressive behavior.

Research in extralinguistic or nonlexical speech falls into four areas: vocal (pitch, loudness, timbre), temporal (rate, duration, rhythm), interaction (tendencies to interrupt, dominate, and inhibit), and verbalistic (pronunciation, dialect, and expressiveness). Soskin and Kauffman (1961) found that when semantic content was filtered out of speech the drive and emotional states of speakers could be determined.

Goldman-Eisler (1958) found that the rate of speech can be used to discriminate various mental processes. The average length of spontaneous speech has been demonstrated to increase as group size increases (Soskin and John, 1963). When two persons talk, a distinct lengthening and shortening of one person's remarks affect the production of the remarks of the other persons (Matarazzo, Hess, and Saslow, 1962).

Speech characterized by hesitations, interruptions, and errors appear to reflect underlying psychic stress (Levin et al, 1960). Normal families appear to have a higher rate of speech interruptions than do families with a history of mental illness (Mishler and Waxler, 1966).

Mahl (1959) has extensive evidence which indicates that disruptions in one's speech are a definite signal of high anxiety. Feldstein (1964) suggests that speech disturbances can be used to distinguish among the affects of hate, anger, depression, sadness, joy, fear, and nervousness.

To the extent that non-verbal behaviors are not the resultant of deliberate social training, they appear to be natural and sensitive indicators of psychological processes. This proposition is especially relevant in its application to young children. Jones's (1969) ethological research on early childhood play has revealed that there is a complex non-verbal communication process occurring among pre-verbal children which could represent the bases for their future social development.

Ultimately, the validity of non-verbal measures rests upon the fact that humans spend a greater portion of their day engaged in non-verbal rather than verbal behavior (Birdwhistle, 1968).

Methodologically, the adoption of non-verbal behavior as the target of observation enhances reliability for the following reasons: (1) it expands the variety of behaviors that could be recorded in natural settings; (2) these naturally occurring behaviors are as precise as any that could be elicited in a highly controlled experimental situation; (3) they are discriminable from other forms of behavior; (4) they are easy to observe and score, thus facilitating the training of observers; and (5) they are

sensitive to variations of independent variables.

There exist at least 30 different types of observation schedules for recording non-verbal behaviors in the categories referred to above, and still others not discussed here, for example on attentiveness and involvement. This writer proposes that these be collected, and that the most promising of these schedules be adapted and integrated into the project's present observation and analysis systems, to increase our understanding of the affective dimensions of learning environments.

C. The development of procedure for mapping the autonomous and integrated behavior of pupils.

David Jackson and Joseph Grannis

There is no way to report how many questions, false starts, choices, and judgments have intervened between our first coding attempts last fall and the procedures that we are now confident will work and do justice to the issues. That we have arrived at the idea of mapping a child's behavior in each of six domains, time, space, objects, persons, self, and knowledge, and then of judging the relative autonomy and integration of the child's relationships in each of these domains, is our principal accomplishment to date. We shall discuss here in detail some of the problems of analyzing behavior in time, and the solutions embodied in the first map that we have developed. We shall then discuss briefly the work that remains to be done, to be elaborated on in the May 31st, 1971 proposal.

As the Overview states, problem solving and proximal goal accomplishment seem to be the focus of behavior in time, or conversely, those investigators who have attended to problem solving and proximal goal accomplishment have tended to cast their analysis in a time frame of reference. The latter observation applies equally to theorists as diverse as Bartlett (1958), Dewey (1933), Duncker (1945), and Miller, Galanter, and Pribram (1960). All have emphasized intentionality as a key feature of behavior in time, and the progressive redefinition of goals, especially in problem solving, as an aspect in turn of intentionality. Even Skinner's concept of operant responses as voluntary, and his attention, especially in programmed instruction, to the feedback aspect of reinforcement, lends itself to a goal oriented interpretation of behavior in time. However,

we do not need to distort Skinner to justify our own concern with goal oriented behavior. We shall be distinguishing between behavior that is more and behavior that is less goal oriented in time, and we might well argue that Skinner's theory applies best for the interpretation of that behavior that is less conspicuously directed by proximal goals, or that is less cognitive, using the term "cognitive" here with one of its special meanings.

Our decision early in the design of this year's study to conduct behavior stream observations of individual children had to do precisely with its methodological orientation to intentional behavior. Wright (1966) consistently advocates observing and analyzing behavior at a level of directed action. He writes, for example,

Two processes in episoding are implied here. The first is diagnosing the end toward which the person is moving, and the second is judging whether the "movement" brings the person nearer to that end. The total process is circular. The new position is determined from the behavior of the person and the direction of the behavior is determined from its relation to the new position. In reality, however, the judgments usually are not analytical. The direction of the behavior in relation to the new position and vice versa generally are immediately apprehended; the unit of the action in an episode generally is perceived almost as immediately as the unity of a visual form or an auditory pattern. (Wright, 1966, p. 75)

Wright develops a number of criteria and cues for episoding, which in general have not proved problematic for our use. We have realized, it must be said, that many larger or more distant goals of a person's behavior -- learning everything about cars, or making friends, or growing up -- cannot be construed solely at the intermediate level of action recognized by Wright's criteria, and that these goals may nonetheless be very important from the standpoint of autonomy and integration. However, we think our mapping of an individual's relationships in the domains of space,

objects, persons, self, and knowledge will lend themselves more readily to a consideration of these larger goals. Maps of space or object or person relationships at different points in time could be compared, indeed, for evidence of differences in integrated and autonomous relationships at different times. Still, our analysis of these relationships would not be as concerned with their in-time aspect as the analysis of problem solving and proximal goal accomplishment, which, almost by definition, must be examined in a time frame of reference.

Let us suppose that, for the eventual purpose of mapping goal accomplishment in time, a behavior stream observation record has first been episoded in essential accordance with Wright's criteria, i.e., the criteria of Barker et al as represented by Wright. Many episodes, some very brief and some quite extended, will be identifiable in the behavior of any child that we have observed for, say, a morning in school. Which of these episodes should be examined for autonomy and integration of goal accomplishment? For most of the past year we have struggled with a dichotomization between "on-task" and "off-task" episodes, not because it was demanded by any inherent logic of episodizing, but, we now realize, because the distinction was ingrained in our own conventional ways of thinking about schooling. "On-task" tends to refer to those activities that are sanctioned for the child's learning in a given setting, and "off-task" those that are not sanctioned or at least that are incidental to the learning presumed in a given setting. (Gump has essentially this distinction when he counted the frequency of on-task and off-task behaviors at 15 second intervals.) The problem that has insstently recurred is that learning may in fact be as much, or more involved in

activity that is not sanctioned as in that which is. Indeed, for reasons linked to the origin of our initial assumption, it is fairly easy to make an on-task/off-task distinction in highly dominative learning settings, but the distinction becomes progressively more difficult and arbitrary as one examines behavior in more integrated learning settings. Our solution will seem simple enough to one who does not start with our preconception. It is that we not make an initial distinction between on-task and off-task episodes, but be open to considering any activity directed toward goals a candidate for our analysis of behavior in time.

The on-task/off-task question has turned out to involve some crucial issues that ought not to be lost. The distinction is made in dominative settings because non-sanctioned behavior is seen to be incompatible with, or actually disruptive of, sanctioned behavior, seen from the standpoint either of learning or of social control. In the dominative classroom talking, for example, may be competitive with the teacher as source of information or of pacing. The same assumption is not made in the integrative classroom, where talking or play may not only be compatible with, say, preferred goal accomplishment, but may even facilitate it, for example by facilitating the communication and interpersonal adaptability necessary for cooperation in complex tasks. We propose to study this issue by distinguishing between subsetting specific and subsetting non-specific behavior, thus avoiding the reflection of sanctioning in our own coding, and then asking what combinations of these do in fact occur under relatively dominative and integrative conditions respectively, and in what association with goal accomplishment, either of subsetting specific or of subsetting non-specific goals. Not only will this add to our understanding of the

goal accomplishment possible or likely under various conditions, but it will lead directly to criteria for judging the autonomy and integration of behavior under these conditions. Very crudely, we can stipulate that behavior is autonomous to the extent that it is self directed toward goal accomplishment, and integrated as it coordinates the accomplishment of more than one goal simultaneously. The child who can pursue his own work and his social pleasure together, differentiating and integrating them when each is called for, is an example, though not the only one, of simultaneous autonomy and integration.

In effect, one's not distinguishing between on-task and off-task behavior is forced by the realization that what is off-task for the teacher may be on-task for the pupil, i.e., may be related to alternative goals the pupil is acting to accomplish. The result of this is that the number of episodes potentially analyzable for autonomy and integration is increased over those one counts by recognizing conventionally on-task episodes alone, and thus the necessity for selecting episodes to code becomes even greater than before. Our first approach to this is to select from a given segment of time, say an hour, the one or two episodes that are the longest in time, and to map them by the procedure to be described below. A second approach would be to select episodes according to the goals involved, either a specifically prescribed goal, a subsetting specific goal, or, the most general criterion, a goal that meets some criteria of quality or complexity specified by us as coders (though not necessarily specified in the classroom). Consider each of these three latter alternatives separately. (1) In next year's evaluation we want to compare the behavior of different pupils each directed toward the same goal, and therefore to prescribe a same goal for each. This would be most appropriate

for our analysis of behavior in Type 2, convergent individualist, setting. (2) The specific prescription of a goal would be incompatible with the idealized conditions represented in a Type 3, divergent individualist setting, but it would be appropriate for us to include a subsetting specific goal in our selection. (3) In any of the settings, but especially in settings of Types 3 and 4, we could elect to analyze the behavior directed toward a pupil's most complex or elegant solution of a problem, irrespective of whether it was subsetting specific or non-specific. If the complexity of the solution is the criterion, a reasonable first approximation to identifying the episode is to choose the longest episode. This was the first criterion suggested above, and it is the one we have used initially for our trial mapping of episodes this spring.

Problem solving is viewed by some, for example Gagne (1965), as a distinct and rarified class of learning or of learning objectives. From this standpoint, our focusing on problem solving, or the accomplishment of complex goals, might seem to be an arbitrary or biased course. We are very much influenced by Dewey in this, but our interpretation of problem solving is broader than his, encompassing a wider range of behaviors directed toward the resolution of discrepancies than Dewey's five-stage formulation of problem solving, and his examples might suggest. Miller, Galanter and Pribram's (1960) test-operate-test-exit model comes closer to our own view, and they too acknowledge their debt to Dewey's formulation. The TOTE model fails for us at the point where it is committed to information theory, because, in our view, a person processes information in larger chunks (to use one of Miller's own terms from another context) than information theory has been able to handle (Hunt, 1962). The terms

or categories employed in our goal accomplishment/problem solving/ discrepancy resolution map are admittedly crude. However, in a sense that is significantly related to the behavior stream observer's focus on middle-range, intentional behavior, our mapping categories are meant to refer to middle-range problem solving acts.

If the course of an individual's behavior in pursuit of a goal involved no problems -- no deflection from the course to deal with materials-, information-, or operations-discrepancies, or no substantial alteration of the goal along the course - we would say that he is not learning, but is executing smoothly an already learned performance. The execution of a mastered skill tends to exhibit this smooth quality. While discrepancies are indeed involved all along the way, as the individual matches the present against the intended or envisioned state, deflections are not observed, but, again, his performance is smooth and probably efficient, at least in his own perception. Does this definition exclude a nearly errorless performance in programmed instruction? We do not think it necessarily does, but we would impute a greater degree of cognition to such a performance than strict reinforcement theory acknowledges. By either interpretations, we are persuaded that the complexity of cognition that molecular linear programming, especially, allows, is quite restricted compared with the complexity possible with non-linear, or altogether non-programmed, instruction. This assumption is built into our matrices. It argues not so much against programming as such, as against indiscriminate programming for every instructional purpose. We have declared ourselves of this here because it is likely that our mapping procedure for the analysis of problem solving will show that more complex performances are associated with non-programmed instruction. It must be clear that our reflections, and not merely unanalyzed prejudices, have informed our procedures.

The Problem Solving Map

The map is designed to trace each action the subject makes in his attempt to solve problems. During the pursuit of identifiable goals, obstacles arise which block smooth progress towards the goal. An analysis of how the child deals with these problems will be greatly facilitated by a detailed account of his attempts to overcome obstacles. A discussion of how the map is used to code episodes of problem solving follows below.

1. Coding the initial setting. After selection of the episode to be coded the coder makes judgments describing the setting conditions at the beginning of the episode. (See setting code.) These setting conditions represent the teacher's expectations of the subject's behavior and thereby constitute the initial limits within which the child can govern his own behavior. An example will illustrate how the teacher's expectations become manifest as concrete boundaries in the child's experience. If the teacher prescribes a certain set of materials but does not provide them for the child, the child is consequently required or allowed to obtain the materials himself. During the gathering of the materials he is governing his own behavior to some degree. In another situation the teacher does not prescribe any materials and doesn't even suggest any. In this situation, the area in which the child governs himself is wider than the first example cited. He can decide which materials to use and how to obtain them. Teacher expectations constitute the boundaries of child-governed behavior.

How exactly a child's performance matches a teacher's expectations is observed in the mapping of the subject's behavior. The child may fulfill

Insert A

Setting Code: Teacher behavior as reflected in the normative limits within which student goal directed behavior occurs.

Goal: single prescription or choice of prescriptions
goal assumed or choice of assumed goals
single suggestion or choice of suggestions
no direct suggestion
mutual negotiation of the goal

Information:

information prescribed and specified	└──────────┐	provided available not available
information assumed (prescribed but not specified)	└──────────┐	
information suggested	└──────────┐	
information not suggested	└──────────┐	
information mutually negotiated	└──────────┐	

Materials:

prescribed and specified	└──────────┐	provided available not available
assumed (prescribed but not specified)	└──────────┐	
suggested	└──────────┐	
not suggested	└──────────┐	
mutually negotiated	└──────────┐	

Route:

single prescribed or choice of prescriptions
single assumed or choice of assumed
single suggested or choice of suggestions
no suggestions
mutually constructed

Solution Feedback:

criteria prescribed and specified
criteria prescribed but not specified (assumed)
criteria suggested
criteria not suggested
criteria mutually constructed

Insert B

GOAL

Smooth functioning: Match

DISCRE

How Real

WHO
Teacher Aide

HOW
Given Request

Feedback
Teacher Aide Rule or sign

Goal
(Re) Definition

Provision
Discrepancy

Infor
Discr

with whom
Teacher
How
given

aide

requests

what

WHAT

Progressive Specification
Goal narrowed - new sub-goal created
Goal expanded - extended
Original goal
Goal expanded - included new sub-goal
Goal abandoned

Specific Info/provision
Generalized Info/provision
Info/Provision + More
Facilitating info
Space

Consequences

Consequences

Accepts
Modifies
Rejects

No answer
apparently suitable
suitable
uses adequately
uses inadequately
Proced
Accepts

Relationship between Performance and Criteria → SOLUTION

CREPANCY

Realized

Aide	Self	Peer
Requests	Does	Negotiate
Feedback Source		
Rule or sign	Real life object	Peer

Sanctioning

With/From whom	
Teacher	Aide / Self / Peer
How	
Given	Requests / not requests / negotiates
Receives it / Doesn't Receive it	
Needed / Not needed	

Information discrepancy

Operation Pause/Block/Failure

Solution Discrepancy

self	peer
does	negotiates

Procedures

Info/Provision	Facilitating info/prov. + More
Specific, prescribed	Suggested procedures
Routine	Acquisition Search
Extended	Search
Quits	

WHAT

Hints	Analogs
Answer	Specific Help
Generalized	Help
Suggestion	Repeats Operation
Alter operation	Alt-proced.
new operat.	rt-content
copies	route-samegoal
Guesses	
New Operation	New Goal
Quits	

Procedures

Accepts	modifies	rejects
Acquires partial info/prov.		
Acquires all info/prov.		
acquires no info/prov.		
acquires info/prov. +		

Consequences

Failure	
Help specific	Accepts
answer	modifies
suggestion	Rejects
hints	
general help	
Partial Solution	
Solution	
Operation Successful	

It's a book about animals, I guess.
They're flipping thru.
There's a picture of a crab, they passed that by quickly.
Picture of an octopus
Picture of a fish, They have now a picture of a shark.
They stopped and looked at that shark.
Shark's a big picture, emphasizing the teeth of a shark.
Now they're looking at the picture of a porpoise.
The kid is looking for a picture that's small enough for him to trace.
Because he's got a very small piece of paper, not more than 4 inches by 5 inches.
He's taking the picture, and he held it up to the shark's mouth, and he held it up to the thing.

Now Homer leaves him to put the cover onto the box.
He has to slide it on because it's got a bottom part.

He slides it on.

He's left, I can see, two pieces on the ground, one connecting red and one of the building pieces.

He takes the glue and plops it right on top of the counter near where he was working.

He goes over to a friend who just got a book and takes the book from the friend and puts it in the library.

He gives his friend the paper and he says, "Let's write a story."

And he says to the friend, "Give him a piece of ~~the~~ paper."

And says, "What are we going to write about?"

And he points to the airport and he says, "This."

Setting

Goal: None suggested

Mat: Not suggested

Info: Negotiated

Crit: Negotiated

Role - Mutual negot.

Int. with Peer

Self realized goal
definition

self ~~defined~~ goal,
new ~~thing~~ ~~induced~~

accepts goal

(Beep)

Self realized Provision
Inadequacy

Self does routine
acquisition
apparently suitable

included other
goal

Self real. Prov. Inad.

Self does routine
acquisition
apparently suitable

Self requests peer
sanction
receives it

Self real. Prov. Inad.

requests specific peer
help
no response

Self does routine
acquisition

negotiated acquisition
with peer
suitable

pencil + magazine
Self uses adequately

Smooth
functioning

He goes over to a magazine rack.

He's now over there.

He brought some magazines over and plopped them down on the rug for the,
put the paper on
to while they're writing.

And now he's over there by the record table.

And they're holding some records with the earphones up so he can hear.

And he's jumping, saying "ooco".

And he holds it up to his friend.

And his friend whom he's going to write with is also leaning up there.

Now he's over at the boxes, reaching in.

Reaches in somebody's ^{cutty box,} gets a pencil.

He comes over to the girl who's box he took it from.

He asks her, "Can I use your pencil."

He sits down. He calls his friend, "Carnegie Bobby," he calls his friend over

He's going to write the story with.

Bobby doesn't come over.

He hops over to Bobby.

Bobby's coming over so he waits him

And they come back and he sits down.

He writes on the thing, the one paper, and Bobby comes over and starts

writing on that paper.

So he sits down now with his friend and they're going to write.

He's got a paper, and the first word he's written on top of it is his name.

Now his friend is over, and he's written his name, Bobby, on the top of
his page.

And they begin to write.

M E A, me and Bobby, and he writes O. Now Bobby comes over and looks at
what Homer has.

He has to lean.

They're facing each other so he has to lean over and turn his body around so he can see.

Now he writes, "Me and Bobby made, M A D E ..."

Now he stops, and looks over at his friend Bobby has written.

Bobby is a little bit behind him, not quite as fast.

He's lying flat out on his stomach, with his feet up in the air.

Now he has to write ~~AIR~~ ^{Force}, and he rolls over, looks over at this kid who's playing, gets up,

I'll bet he's going to look for his dictionary.

He goes around the table, leans on the kid's shoulder, jumps up, goes straight to his cubbyhole, gets his dictionary out of his hole.

Goes over to it.

He's digging in somebody's box.

Now he's digging in his own box.

Looking for something.

Says somebody's name.

Like the kid, "Where's my eraser?"

And the other guy says, "I don't have it."

He says, "You took it."

And he gets it from the kid.

It was in the kid's pocket.

Now he puts it, he says, "Bobby."

Bobby needed an eraser.

He puts the eraser down next to Bobby.

Now he comes over to the teacher.

Now he's asked for the word FORCE.

Self real. Operation

Block

self real. Info.
Inadequacy

self real. Prov. Inad.

self does routine acqui.

apparently suitable

self real. Prov. Inad.

self does routine acqui.

Failure

self does routine acqui.

Failure

request specific & peer

Failure

request more specific & peer

apparently suitable

adequately

requests specific info from teacher

(Beep)

HMPR 4/27/71 11:0-11:30 a.m.
Bank Street Flattsburgh Jackson page 11

to her given
Solution Discrepancy

teacher given hint

self accepts hint

uses adequately

5 math functioning

For the word AIR FORCE.

And she says, "Air force is one word, it's a compound word, so what letter would air force begin with?"

And she says, "A." So she's now writing on his A ~~page~~ page, she wrote air force for him.

She's written that.

Now he comes over here, and shows Bobby, "There's the word," and shows him the word air force.

He's spelled Made M A R D . and the next two letter are A, A and A.

So he's writing his story.

Now he and Bobby made M A R D an , he's got A,A. he's going to write Air force.

He got A, now he puts down the I, now he's copying the R.

He's copying one letter at a time, from his dictionary in which the word air force, is there.

O now R, now C now R.

He's copied each letter one at a time.

After he wrote the letter he looked back up at the dictionary to copy the next letter.

Now a girl has come over and asked him something.

I didn't quite hear what it was.

And I think they're looking for a book, it's called Automobiles.

It's a book about cars.

Now he turns around, now he's watching as he's turning.

Bobby looks thru the book on cars.

Now he inches up closer to the library shelf and gets out a book on

included other goal

Looks at it for a second.

Looks up at me, flips thru it for a second, puts the book right back.

Whips around, turns around.

Idea out gilet in his stomach so he's be able to write.

Leaning on his elbows.

Now he's beginning to write lying flat down again. With his feet up lying down.

He writes and very quickly, A N D .

Now he's looks up to see how Bobby's doing, picks up his hand and looks And had, H.A.D. I made M A E D , mda, right.

What's he writing now? A Tee.

self real. Sel. Discrepancy He crosses the T, he crosses the top part of the T, he doesn't like it.

self real. Priv. Inad. Looks up. I guess he asks for the eraser.

requests specific sample Bobby leans over, gives him the eraser.

aff user adequately Lets see, maybe he's copying what Bobby had written.

self real Info Inad. Bobby has written, "Me and Homer have made a air force, M A Y ED, and have made , M A Y E D , a lots planes."

self does routine acq. They both spelled made different ways, each of them wrong.

uses adq. And now they're looking up the word LOTS, I guess.

self does routine acq. Homer is copying from Bobby the word LOTS.

uses adq. L O , now T, he says and pointed to it.

Now he looks back and

Now he looks at the word planes.

He's copying the word PLANE letter by letter from Bobby's paper.

Yes, now he's finished it.

He quickly moves the paper over and goes to the second line, and writes AND again.

Smooth functioning

Picks up his dictionary.

Bobby has his arm on it. He waits.

Now he looks over at what Bobby has.

The dictionary's back down.

And I think he's copying what Bobby has.

Now he's writing.

He's kneeling over on his elbow and writing on his elbow, ROCKETS.

That's the next word he's writing in, ROCKETS.

Peer given Sol Disc.

Peer gives answer
↓
self accepts it

Bobby ~~HEARD~~ just said, "Put an S on it," when he saw it.

He puts his pencil down, gets up, takes the paper, holds it straight arm, runs over and shows it to the teacher.

She reads it, she is reading it, she is reading it.

Now she says, "Read it."

He is reading it now.

Reading the story as he wrote it to her.

~~HEARD~~ He nods.

self requests from
teacher Sol Disc.

teacher gives hint
↓
peer take hint

At the end of that sentence, ~~HEARD~~ ^{you} put a, both of them, ^{say} ~~say~~,
"Period?"

She nods her head, and they walk away smiling.

Heard's got his hand on Bobby's shoulder.

There's a long pencil. Heard had a long pencil

It's much shorter now.

He looks at the top part.

It's got no answer.

Now he throws it back to the guy who's working on the game and ~~across~~
across from him on the right there.

He's put the ~~HEARD~~ period on his paper.

He looks at me.

negotiates
 peer Goal Redefinition with peer

Smooth functioning

satisfaction

self real. Sdu. Disc.
 alters operation-content

negotiates Goal Redef.
 with peer
 goal expanded
 included new
 subject

Now they're talking.

I guess they're trying to decide.

Oh, Bobby just said, "Let's read it."

Now they read it together.

They each read their word.

Homer's doing something else, too.

He puts in the word "Of" after Love, and now Bobby does that too.

Just like Homer.

Now they're leaning back, talking.

They're turning the paper over.

Homer does, and Bobby begins to write on the same side.

And, they're writing *f*uriously, you might say.

And no, NO, is on his paper.

Oh, it's hope, I think.

Cause Bobby said, Look, it's over here and just spelled out."

And hope, H O P E , on it.

This night, I have a feeling give us a clue about what Bobby, what Homer was talking to the teacher before.

And we hope..."

They're having trouble with the next part here.

And we hope they're on the word NOBODY.

They've got NOB so far.

Now Bobby picks up his dictionary, goes over to the teacher.

They've got NOB, and now Bobby comes over.

Now he pulls. He says, "I know how to do it."

He says, "First you write NO separately, and then NOBODY."

See what they're going to do here.

self real.
~~peer~~
~~frank~~

self realized Info
 Ined.

requests specific from
 teacher

goal satisfied

oper successful,
 uses adequately

given Oper.
Failure
self reports operation
operation successful

He crosses the B, Bobby does.

Now Homer picks up the paper, and crosses his B.
Oh and he wrote BOBY.

Bobby knew how to spell BOBY.

And now Homer copies that from Bobby's paper.

Homer has written his B, backwards, small B. IXX it looks like a small D
on both of them

He's got BOBY instead of BOBY.

peer given Sol. Discrep.
self reports Oper
operation successful

Bobby points to it and says, "That's wrong."

Now Homer crosses it, and corrects it.

And now Bobby starts writing something else, a BBA.

And Homer is very busy copying.

self + peer real.
Solution Discrep.
peer reports oper.
oper. successful.

He wrote the word BBA, B.B.A.A.A.A. and now IT.

Bobby writes IT instead of IT.

They both noticed it was wrong and laughed a little

And now as he does it, Homer puts his hands around Bobby's shoulders and
tells him correct the word IT.

Now he takes his hands off.

And he puts a D. They're writing something else now.

D.O. breaks it down, D.O.

Homer has written D.O.M.N. instead of D.O.M.N.

And now they're writing AGAIN.

They write again.

Bobby has spelled it again. AGAIN. Which is...

It's already 21 minutes after 11:00.

Bobby's got DOWN DOWN and Homer has copied that onto his paper.

He has spelled DOWN wrong. He spelled it DOWN.

Smooth
functioning

the
some but not all of/teacher's expectations, or he may expropriate areas outside the limits set by the teacher and make decisions the teacher had not expected. He may, for example, use materials the teacher had not specified.

The setting conditions can, of course, change during the course of an episode. In some problem solving episodes where the child and teacher are interacting frequently, we might observe a series of changes in the setting conditions, as the teacher adopts the limits to the perceived competence of the child. The coder will, in such cases, recode the setting at the appropriate point in the behavior stream.

2. Identifying discrepancies. After coding the setting conditions, the coder identifies the first discrepancy. A discrepancy is any indication that the subject is aware that his goal-directed performance has deviated from a smooth and continuous adherence to the criteria in use. It can be observed as one of the following:

- 1) Solution discrepancy: a mismatch between an obtained solution and the solution appropriate according to the criteria that are in use at that time.
- 2) Operation pause: a pause or block in the operations on info/materials.
- 3) Information/Materials discrepancy: the presence of too much or too little information and/or materials which interrupts the smooth goal oriented performances of the child.
- 4) Goal (re)definition: the articulation of new proximal goals which further direct or redirect performance.

3. Coding discrepancy recognition. The coder then decides how the subject became aware of the discrepancy. Three decisions are made;

(1) who does the subject interact with, (2) how do they interact, and (3) what is the source of the feedback. [A complicated realization of a discrepancy might occur as follows:] The following excerpt from a behavior stream is an example of a complicated realization of a discrepancy and how we would code it.

<u>Code</u>	<u>Specimen Record</u>
Self requests from teacher ↓	Artis runs up to the teacher and shows her his story.
Teacher gives written source ↓	Teacher notices two misspelled words and says, "Use the dictionary and check those four words."
Self does written source ↓	Artis flips through the dictionary and sees that two of the words are incorrectly spelled.
Self realizes solution discrepancy	

The coded sub-episode contains four steps leading to the recognition of a discrepancy. The delineation of the successive steps facilitates judgments as to the complexity and difficulty of the sub-episode and to the potency of the child's role in the recognition. For a fuller discussion of the possible interpretations concerning aspects of autonomy and interpretation highlighted by the code, see below.

4. Coding discrepancy and its solution. The coder next notes the child's actions to resolve the discrepancy. With whom he interacts and how he interacts is again coded along with what happens. Each move and the reaction to it is coded until the discrepancy is either resolved and smooth functioning resumed or the problem is abandoned.

During the child's successive moves it is quite likely that the discrepancy might go from one kind to another. An initial solution discrepancy, for example, might become an information discrepancy and then

a material discrepancy before the resolution of the problem. For further examples see the enclosed coded specimen records.

The boxes on the code sheet labelled "what" and "consequences" represent our attempt to list all the possible actions the child could take to resolve the discrepancy. That those lists are incomplete is most evident in the Goal (Re)definition category. All the different ways that goals are redefined will be fleshed out as we apply the map to the specimen records collected during the spring. This is true for the other kinds of discrepancies, as well.

Interpretation of Coded Behavior Stream

It would certainly simplify things if an accurate assessment of a child's control of his learning could be gleaned directly from the coded behavior stream. The complexity and ambiguity inherent in any serious analysis of human behavior, especially of the complicated sort we are concerned with, warns us against overly facile and pseudo-efficient judgments. The coded stream provides us with the descriptive tools to begin the analysis of the patterns of autonomy and integration in the child's behavior. We will present below some tentative suggestions about the directions this analysis will take. Let us here emphasize both the tentative nature of these approaches, and our confidence that the uses of our code will answer the questions central to the purposes of CCEP.

In our analysis, children solving problems under similar setting conditions will be compared. The number of discrepancies that occur in a given episode, a time period, will provide some measure of the difficulty of the activity for the child. One child, for example, wrote two stories, both very much alike: "I like Mrs. Moos. Mrs. Moos likes me. Mrs. Moos is pretty." and "I like plants. Plants like me. Plants are pretty."

While writing, the girl encountered very few discrepancies of any kind. A second child we observed wrote a story in which he used many words he didn't know how to spell. He frequently paused to decide what to write next and often conferred with a friend, with whom he was writing, for the resolution of these discrepancies. The code of this second stream would contain many discrepancies, many requests for help from both peers and the teacher, several provision acquisitions, occasional use of a dictionary, and two sub-episodes of goal redefinition. None of these mapped actions appeared in the first stream, demonstrating how unproblematic was that episode for that child. The absence of discrepancies leads us to conclude, therefore, that little new learning occurred autonomously in the writing of these sentences, at least by contrast to the second child, who acted autonomously to overcome a number of problems he encountered. This judgment does not speak to how autonomously the girl could act, if her goal involved more problem solving. An analysis of the child's behavior in several situations where, as in this case, she chose her own goal would reveal her disposition to choose activities that challenged her, and her capacity to cope with the challenges. Moreover, we would not ignore the possibility that the content of the child's sentences might tell us about her relationships with other persons and objects in the learning environment. The content might figure in our mapping of these relationships, and would be examined for its affect, the relative stereotyping or specificity and complexity of the relationships, and changes in these qualities of the relationships over time.

Let us imagine another situation where approximately the same frequency of discrepancies occurs for two children, and both children, as above, commenced the episode under similar setting conditions. Each time the

first child encounters a discrepancy he remains in his seat and waits or diverts to subsetting non-specific behavior, for example, tapping rhythmically or looking generally around the room. Eventually, the teacher comes over and resolves each of the successive discrepancies. The code here contains numerous instances of "teacher gives child answer", or "teacher gives child alternate operation-procedure", "teacher gives child provision", "teacher gives child specific information". The second child on the other hand, continually gets up and asks peers and the teacher for help, goes to the dictionary, and chooses alternative words and in other ways resolves discrepancies for himself. The code here contains instances of "child requests specific help from peer", "child alters operation", "child does extended search", and so forth. Clearly in this second case the child is acting more autonomously as he uses the opportunities in the setting for self governance in problem solving. The first child does not use these opportunities and so compelled the teacher to act more dominatively than the setting norms imply. (It is true that the teacher may have more control over her responses to the child, than this example reflects, even after coming to him without his request. One cannot, therefore, ignore the teacher's role enactment in this analysis, and teacher's roles will be carefully regulated in our own evaluation settings.) The contrast has been drawn very sharply here, but the mapping procedure can discriminate between performances that are not so obviously different as those we have just described. The procedure allows us equally to compare different children in a given setting and the patterns of behavior that are associated with various settings. Our capacity to describe the criteria for autonomy will become increasingly specific as these patterns are discovered in this year's data. This is precisely the strategy for the development of criteria that was

proposed in our original project proposal, and we are substantially ahead of our schedule for accomplishing this.

We have said nothing about integration in this discussion of the problem-solving map, and yet integration has become one of the central concepts of our work and a focus of criteria for the evaluation of learning behavior. Autonomy and integration are related. They are like the twin foci of an ellipse, each accounting for, or the resultant of, the path of behavior that the contour of the ellipse describes. Rand, below, speaks of autonomy in terms of the quality of an individual's adaptation to the environment, and stresses the dialectical nature of this adaptation. We could speak instead of a dialectical relationship between autonomy and integration that gives to adaptation its character. Autonomy, in all its uses, has to do with self direction. Integration, in all its uses, has to do with the binding of the parts of a whole, and especially connotes the binding of the parts of a whole that includes the self or parts within the self. In social philosophy, "integrated" and "organic" are often used almost interchangeably, signifying that the parts of the whole maintain their identity and self-directedness within the whole. A "mechanical" integration, if this is not a contradiction of terms, would signify an organization that did not maintain the separate identity of its parts, and in which the parts were directed externally rather than spontaneously or autogenically. Integration in its fullest sense, therefore, assumes the autonomy of the parts of the whole. This directs us, when we are examining behavior for evidences of integration, to look first for the relationships between the individual and others, or within the parts of the individual's behavior, and then for that recognition of the identity of the other or of the parts of his own behavior that is the reciprocal of the individual's own autonomy.

The relationship of assimilation to accomodation in Piaget's interpretation of adaptation seems to be analogous to the relationship between autonomy and integration.

Gradually, as the child's thought evolves, assimilation and accomodation are differentiated and become increasingly complementary. In the realm of representation of the world this means, on the one hand, that accomodation, instead of remaining on the surface of experience, penetrates it more and more deeply, that is, under the chaos of appearance it seeks regularities and becomes capable of real experimentations to establish them. On the other hand, assimilation, instead of reducing phenomena to the concepts inspired by personal activity, incorporates them in the system of relationships rising from the more profound activity of intelligence itself. True experience and deductive construction thus become simultaneously separate and correlative, whereas in the social realm the increasingly close adjustment of personal thought to that of others and the reciprocal formation of relationships of perspectives insures the possibility of a cooperation that constitutes precisely the environment that is favorable to this elaboration of reason. (Piaget, 1954, p. 385.)

Autonomy and integration might be said to signify especially the mature or most developed forms of assimilation and accomodation. Domination might by reasoning be the immature form of autonomy, and submission the immature form of integration, allowing that domination and submission are as little differentiated as the immature forms of assimilation and accommodation. Just as domination and submission require each other, autonomy and integration require each other. From the standpoint of the behavior of the self, both assimilation-accommodation and autonomy-integration are interpretations of adaptation. The latter concepts, however, have a more emphatic reference to the social realm of behavior, and thus have a value significance that is less apparent in the terms assimilation and accommodation.

By either our own or Piaget's reasoning, the key to our identifying instances of an individual's integrative behavior is his "recognition of the identity of the other or of the parts of his own behavior" or his "penetration under the chaos of appearances" and "close adjustment of personal thought to that of others". We have construed "others" in the largest

sense that includes everything that might be the object of a relationship with the self, and have designated these others as activities in time, the realm of space, objects, persons, self, and knowledge. No doubt this is not an exhaustive classification. Were we to add social institutions, we might examine the child's relationships with his family, his church, the school, and the state, as, indeed, an inquiry into the child's socialization must eventually do. For now, however, our attention is directed to the child's relationships within the school and across the boundaries of the school. From these we might later infer some of the foundations of the individual's larger relationships to society.

To return from these thoughts to the problems of identifying integration in behavior is humbling in the extreme. Nevertheless, it must be done, and we shall proceed without further apology. First, let us observe that, as with autonomy, the integration that is possible for an individual depends on the conditions under which his activity is conducted. Assuming, to begin, a capacity for integration, it is at least possible under highly dominative conditions and most possible under integrative conditions. Under dominative conditions, the potential objects of integration are severely restricted, and those that are present require him to submit or not to submit. The individual's not submitting might be the result of his sensing that his capacity for integration cannot be fulfilled. In this case one often speaks of the individual's alienation, just as rebellion might be the response of the individual whose capacity for autonomy cannot be fulfilled.

On the other hand, however, the individual's not submitting might stem from an incapacity to submit, and might be sensed as a failure just as much as an incapacity to be autonomous, or to dominate, as one might better say of the requirements of the most dominative conditions (where the individual

must dominate a task, or his fellows, or the leader, in order to achieve a sense of self accomplishment). A partial or "satellite" submission to significant others is in fact recognized by a number of psychologists (Kohlberg, 1969) as an early stage of the development of integration and the autonomy associated with integration, especially in the family. It is conceivable, and consistent with the stage interpretation of our matrices, that a parallel submission to the authority of the teacher or of a discipline to be learned is a first condition for the development of the norms of schooling (cf. Dreeben, 1968). Once again, we would be obliged to recognize the priorities of each learning environment that the matrices describe, though not at the same time the necessity of closing the environment against further development.

In a classroom situation where writing is prescribed, attending to the writing is likely, in the undifferentiated sense of integration as submission, to be more integrative for the individual than not attending, especially if the theoretical conditions of the matrices are fulfilled, in this case, that there is a match to the expectation of the child that he should learn to write, and that the dominative conditions generally prevent alternative integrative activity by the individual. We have observed children this year whose inattentiveness to prescribed tasks did indeed seem to be the result more of their lesser ability to attend than of their rebellion or alienation, the latter being exhibited typically in more consistent behavior than the in-and-out quality of inadequate attention. Were we to code children's attentiveness to tasks or goals, be they prescribed or not, in a variety of classroom situations, we could ask some questions bearing on this first approach to integration. Do two or more children consistently differ in their attentiveness, under the most integrative conditions as well as the most dom-

inative? If so, the less attentive can be said to be less integrated with the activities of the classroom generally. Is a child who is less attentive to a given task under one set of conditions consistently more attentive to the task under another? If so, he can be said to be alienated from the more dominative definition of the task if he shows a capacity to attend to the task under more integrative conditions; and he can be said to be incapable of or not ready to relate to the more integrative definition of the task if he attends to it more under the dominative conditions.

We could easily code for sheer attentiveness to tasks without the use of our map for the analysis of problem solving, and this would indeed be a significant first approximation to the integration of children with their learning activities. We could almost as easily code without the map children's accomplishment of tasks, with or without high self direction, and analyze the data in the manner suggested above to come to some conclusions about this more significant aspect of children's integration with their learning activities. However, the integration of children with their learning activities is a much more complex matter than either attentiveness or task or goal accomplishment. The nature of a goal and the activity directed toward the goal, the relating of one learning episode to another, and the relating of the phases of an episode to one another, all can be charged with strongly different meanings for a child. "Meaning" means that the child can perceive relationships, and thus the integration of his learning activity in these different aspects. The meaning of a child's activity can be inferred from his response to his accomplishment, his turning or not turning the activity or its result to the service of a subsequent activity, and the manner in which he articulates the several or

numerous phases of the activity.

This suggests first our coding the affective quality of each of these aspects of the child's relationship to his activity. Our analysis of non-verbal behavior from the videotapes might be the best place to start. There is a cognitive quality too, however, in these aspects of integration, from which one discerns immediately the inappropriateness of the term "non-cognitive" to characterize all the effects of learning other than those measured as academic achievement. The child's involvement in the definition of the goal of an activity reflects his integration, the more so as there are more options available to him. He can define the goal in a highly mechanical or stereotyped way, or he can shape it as he perceives the possibilities of the material he is working with. The goal can develop out of his own or a shared activity or be presented to him externally, and he may or may not refer to it as a criterion for the regulation of his activity. The child's showing the result of an activity to other children or the teacher, his playing with it, or his abandoning or destroying it, all may say different things about the meaning of the activity for the child. Again, his suddenly connecting the strands of an activity, or his planning or laying out the materials of the activity, can reveal how meaningful or arbitrary the successive steps of the activity seem to him. The more fully integrated is his learning, the more manifest will be the many meanings of the activity for the child.

D. Preliminary considerations for the design of evaluation settings for 1971-72.

George Rand and Joseph Grannis

The first part of this discussion will begin with a specification of the anticipated modal properties of each of the three subsettings to be combined in the evaluation setting now envisioned for 1971-72. The discussion will then comment on the space, materials, teacher training, and observation requirements of the design.

The second, briefer part of the discussion builds upon the first, but is written to probe more deeply into the nature of autonomy and integration in the learning environment.

(1) The following specifications for evaluation settings 2, 3, and 4 are derived from the matrices of the Second Progress Report. They indicate the modal conditions or range of conditions one would anticipate and need to take account of in the design of each setting respectively. These specifications are subject to change as a result of the intensive analysis of this year's data projected for this summer. Once a setting has been designed in anticipation of certain modal conditions, it is of course true that these conditions are liable to variation as the actors in the settings, teachers or pupils, depart from expected roles. The specifications must be taken into account for the purpose of designing settings that are optimal for the behavior anticipated in them. One can then look at conformance to or departure from expected behavior, and interpret these patterns (a) in terms of whether optimal setting conditions were maintained by the teachers, and (b) in terms of the different histories and developmental levels of the pupils in the settings.

The numbers under each evaluation setting characterization refer to the numbers of the matrices from which the specifications have

been derived. The process of deriving these characterizations has resulted in modification of the dimensions of some of the matrices, generally by extension into the mutual domain.

Evaluation Setting Type 2, Convergent Individualism.

Individuals expected to conform alike to learning criteria, supervisory and tutorial teacher roles, cluster and alone group quality, subautonomous pupil roles, combination and individual pacing.

2. This is a work setting temporally and perhaps spatially separate from any play setting. Combination pacing modal, can shift to self pacing modal.
3. Teacher requires high moderate evidence of pupil's learning or productivity, in pupil's observance of right-wrong feedback and completion of prescribed number or range of tasks within fixed time limit.
4. Pupil receives or consults routing feedback, i.e., feedback on the appropriateness of steps enroute to a solution, primarily from teacher and/or written or pictorial rule or sign; some use of didactically designed objects for routing feedback. Routes modally several steps to single goal, may be one step or several routes to single goal; like or progressively unlike goals presented in sequence.
5. Social conduct and knowledge standards essentially same for all pupils, but allowance made for different pupils being at different points in their conformance to the standards.
6. Combination of teacher and pupil initiation and termination of learning episodes, e.g., teacher determines which tasks to be completed during period and child determines order of initiation and termination. Combination minor structuring of learning episodes, chiefly as routing steps are prescribed but pupil decides whether to repeat a step, etc., according to the feedback he receives.
7. Written or pictorial materials requiring small movements modal. Adjacent elements of material sequenced, some elemental and some patterned materials.
8. Extrinsic reward modal, some removal of reward and some intrinsic reward, (removal of reward especially in the sense that failure at any time may entail having to delay moving on to another activity, e.g., a self-selected activity in a Type III setting.)

9. Skill learning modal, some acquisition of facts and some concept attainment. Detailed procedural instructions modal. (Matrix #9 fails to indicate that detailed procedural instructions would be preceded on the dominative to integrative dimension by exhortations that assume, but do not make explicit, specific details of procedure.)
10. Cluster and alone or tutorial group quality modal. Medium rate of teacher-pupil learning-task or (sub)setting-specific interaction.
11. Low, possibly to medium, pupil-pupil learning-task or (sub)-setting-specific interaction
12. Low, possibly to medium, teacher-pupil personal-social interaction.
13. Low, possibly to medium, pupil-pupil personal-social interaction.
14. Low to medium pupil initiation of teacher-pupil interactions.
15. High medium ratio of subsetting specific to subsetting non-specific activity.
17. One solution to tasks modal. Teacher as arbiter of task criteria modal, though peer or self as arbiter possible is some tasks or subroutines are not checked by the teacher for the pupil (i.e., checking is in addition to programmed feedback.)

Type 3, Divergent individualism.

Learning criteria different for different individuals, tutorial and facilitating teacher roles, group quality contain of alone and spontaneous groups, autonomous and sharing pupil roles, individual and short-term mutual pacing.

2. Work and play are fairly integrated in this setting, but the density of persons and objects in the classroom space sets limits on the physical movement or boisterousness that are tolerable or that are compatible with this setting's norm of consideration for individuals who are "doing their own thing." Self pacing and short-term mutual pacing modal.
3. Low moderate or fairly irregular of pupil's learning or productivity required by teacher, i.e., instead of systematic checking there is an irregular pattern of tuning in to where the child is at and of receiving products of the child's effort.
4. Several routes to single goal or to alternate goals modal for maintenance complexity of a given task. Didactically designed or collected objects modal for routing feedback, though the whole feedback range might be consulted.
5. Knowledge and social conduct criteria relative to individual pupils, i.e., both teacher and pupils expected to act toward individuals as distinct others in some respect.

6. Individual pupil major and minor structuring modal, some short-term combination or mutual.
7. Concrete manipulative materials modal, writing on the one hand and large muscle movement on the other tend to be supplementary to concrete manipulation. Modal relational complexity of adjacent elements of material is patterned.
8. Intrinsic reward modal motivation for social conduct and learning, some extrinsic, some shared extrinsic and intrinsic. (Shared extrinsic and intrinsic is a logical extension of the dimension into the mutual domain.)
9. Concept development and imaginative transformation of materials and information are modal. Problems and procedures tend to be suggested but not strictly limited by patterned nature of materials available.
10. Contain of alone and spontaneous short-term groups modal, brief teacher-pupil interactions or tutorials taking place fairly continuously with one pupil or another. Teacher-pupil learning task interaction averages moderately low for each individual pupil.
11. Pupil-pupil learning task interaction medium to occasional high.
12. Teacher-pupil personal-social interaction medium.
13. Pupil-pupil personal-social interaction medium to high.
14. Pupil initiation of teacher-pupil interactions medium to high.
15. Relatively low medium ratio of subsetting specific to subsetting non-specific activity.
17. Many solutions to tasks modal, self as judge modal. Where short-term groups, self with peers as judge becomes normative, solutions possible shifts from many to negotiated (which, quantitatively, sometimes implies fewer solutions possible for a group than for an individual, sometimes more.)

Type 4, Integrated order.

Mutually defined learning criteria, facilitating and participant teacher roles, group quality fully differentiated and integrated, individual and short- and long-term mutual pacing with mutual modal.

2. In this setting work and play are fully integrated. Both in time and in space there must be allowance made for expression and interaction on a generous scale. Mutual pacing modal.
3. Group requires evidence of individual's contribution to productivity and/or maintenance of social cohesion.

4. Feedback received from peers (including teacher as participant) or functional situation involving peers, though individual may split off from group temporarily in the division of effort. Many routes to many goals possible is the original result of pooling individuals, but negotiated routes and goals becomes modal.
5. Knowledge and social conduct criteria relative to group, i.e., increasing differentiation of universal criteria in application to individuals now turns to integration as group constructs goals and procedures.
6. Mutual major and minor structuring modal, some self as individuals split off for division of effort.
7. Large action modal, authentic group discussion may involve less physical movement but presupposes it as forehappening or internalized. Relational complexity of physical or social situations is natural complex.
8. Shared extrinsic and shared intrinsic reward modal for learning or accomplishment and social conduct.
9. Analysis, synthesis, problem solving, construction, modal for quality of learning. Problems and procedures suggested by or addressed to complex physical and social situations.
10. Group dependent shifting to group independent. Teacher-pupil learning task interaction shifts from low medium to low.
11. Pupil-pupil learning task interaction shifts from moderate to high.
12. Teacher-pupil personal-social interaction high.
13. Pupil-pupil personal social interaction high.
14. Pupil initiation of teacher-pupil interactions shifts to high.
15. Relatively low (1/1?) ratio of subsetting specific to subsetting non-specific behavior, i.e., high integration of specific and non-specific.
17. Negotiated solutions modal, self with peers as judges.

The above specifications for subsetting 2, 3, and 4 will be considerably amplified in the further analysis of this year's data and will guide centrally the design of space, materials, teacher training, and observation procedures for the evaluation.

The design of spaces appropriate for subsetting 2, 3, and 4 requires a kind of thinking that is as rare among innovative architects of schools today as it is in traditional school architecture. Most contemporary experiments in radical school design take the form of introducing images of freedom and openness as antidotes to the atmosphere of necessity that permeates the traditional classroom. These idealistic notions increasingly seek to eliminate the school as we now know it in favor of making the city the schoolroom or creating a responsive environment for children to modify and reconstruct. As laudable as these experiments are for their boldness they do not attempt systematically to vary the significant characteristics of the school environment. They often choose, as do many curriculum innovations to eliminate the repressive effects of lines of desks, and isolated rooms bounded within by harsh school walls, by substituting an anarchic setting composed with islands of free space and free-form fittings. What they fail to appreciate fully is that the stultification of traditional classrooms and programs is not simply a product of their morphology, but their stereotypy and distortion of the functions morphology was meant to serve. Traditional rooms using the formal matrix of chairs may be the best arrangement for discussions and activities that require public forms and parliamentary forms of order. The arrangement can be brutal or humane, depending on its manner of use and its aesthetic order. If it is used to promulgate blind obedience to authority, or to focus all attention on the teacher as knower or actor, it will obviously stultify autonomy and integration. On the other hand, rooms which have an open plan cannot eliminate the domination of the teacher by design alone, notwithstanding that an open plan does make strict control less possible. Open plans, further, reduce control at the expense of the optimal conditions for the inter-relatedness of children's activity. In sum, there are complex choices to be made. The

design and the uses of space must be coordinated with a full awareness of the gains and losses each configuration is likely to entail.

Not only the space as such, but the materials, light, and sound of different classrooms will be more or less optimal for the evocation of norms appropriate for different forms of learning. If all the materials of a room are cast in plastic, the child cannot help but feel remote from the process of their creation. The more finished and polished the materials, the less prone is the child to criticize them and the less he feels the capacity to participate in them. Mass produced materials as opposed to personalized collections and constructions of materials represent an important dimension that bears an analogy to the distinctions between convergent, divergent, and integrative programs. Convergent programs make maximum use of mass produced, uniform materials, where integrative programs make use of ideosyncratically selected and creatively used materials.

Contrasts between brightly and dimly lighted regions focus attention in social space, and changing light patterns, for example in psychedelic light displays, evoke intelligence and interpersonal awareness. The contrasts and textures of sound likewise have varying social significances. In a creative teaching workshop visited recently by one of the authors, rock music played quietly in a way that put one at ease with his own occupations. People were later convened for a meeting, but the meeting started precisely with the awareness of one another precipitated by turning off the music.

Experimental rooms that correspond to the three program types abstracted from the matrices for the evaluation settings have not been designed as yet, and could not be without this preliminary thinking. Instead, architectural

caricatures of the three program types will be presented. The concrete resemblances of the rooms to the pupils' home classrooms should be minimal. Instead, it is proposed that salient characteristics of each program be expressed in exaggerated form, in order to examine individual and group adaptations to their implicit mandates. The following scenarios are by no means the final forms of the experimental rooms. They are presented only as examples of socio-spatial design.

Room 2: Convergent individualized subsetting.

This is a room made up of individual carrels, each semi-insulated from its neighbors, for example by partitions that allow some looking about but discourage the transfer of materials from one carrel to another. Light is concentrated in each of the carrels. The room is silent except for the supervisory and tutorial interactions of the teacher and pupils. The materials employed in instruction are uniform, mass produced, and, except for answer sheets, virtually inviolate. The materials are stored in a central cylinder with clearly indicated routes and routines for the pupil's access to them. The teacher does not have a central location, but the routes for the teacher's movement around the room are clearly indicated.

Room 3: Divergent individualized subsettings.

Environment has no contours or object form. It is made up entirely of a series of durable foam forms which create levels or tiers, with plateaus, ridges, depressions, and plains. Cushions are available for the pupils to modify the space and make it comfortable. White noise fills the room, eliminating the distinctiveness of sounds produced by individuals and making the indoor setting more analogous to the free quality of outdoor space. Except for natural shadows, light is evenly distributed. Objects and materials are nondescript. Some may have been manufactured and others found, but there are few copies the same materials or sets of objects,

and neither, before their use, do they have a personal identification with the maker or finder. The location of the materials may originally be central in the room, but they become located in places the pupils identify for their use. Routes are not clearly indicated for either the teacher or the pupils, and neither is assigned a regular location in the room.

Room 4: Integrated subsettings.

This room has two principal areas. One is a space with a large, low platform that all the pupils can gather around, for example for block construction they undertake together, games, or sociodrama enacted by some on the platform. The other area in the room contains an ordered array of chairs, positioned to focus on a leader but also to allow attending to any member of the group. Large sections of the walls and ceiling are covered with a bright base for mounting signs, pictures and objects, all of which are made by the pupils and teacher, or brought in by them from outside. A few materials, for example cameras and building blocks, are provided at the outset for the use of all, but most of the materials in the room are developed by the group as they pursue their common inquiry. A stereo radio and tape system is provided for the group to control sound for itself, allowing quiet, sounds to fit a mood, or playback of earlier recorded activities. The teacher occupies set locations in the room interchangeably with the pupils.

The above abstract characterizations could be realized either in existing buildings or in temporary shelters or in mobile vans, all of which we have been considering. If an evaluation setting (or combination of three subsettings) was to be located permanently in one place, an existing building

might be adapted to our purposes. Even in this case, however, we would probably have less control over the immediate environment external to the classroom, and we would have considerably less control if the adaptation was made for a shorter term. A host school, for example, would undoubtedly provide all kinds of signals to the evaluation subjects that conflicted with the norms of the evaluation setting. Temporary shelters would be superior from this point of view, but they would involve us in a great deal of dismounting and reassembly as the setting was moved. Mobile vans continue, therefore, to be most attractive for the 1971-72 evaluation.

We currently envision housing subsettings 2 and 3 in two sections of a single van, and housing subsetting 4 in a converted bus, the whole referred to herein as the evaluation setting. The pupils would spend the morning in the van, moving from one section to the other on schedules determined at first by the teacher and later by the pupils themselves. The bus would be home base for the pupils in the afternoon, including lunch, but the bus would travel to or be articulated with one or more sites outside, so that field trips to the place(s) outside could be a prime focus for group activity. The design of the bus would permit and encourage constructive activity in transit to the field, and it would have a validity of its own as a place away from the field for the pupils' integration of their learning.

Two settings, each with a van and bus, would be optimal for our purposes in 1971-72. To attempt more than two would involve us in logistical and bureaucratic problems more than we could handle at this time. The van and bus would be designed in July and August, including a mock-up stage before final drawings, and then constructed in the fall for trial use by mid-December.

The curriculum materials would be designed in the summer and early fall, including tryouts with appropriate groups of children. We have examined many materials already, in the classroom observed by CCEP and in other locations, for example IPI. As with the spaces themselves, the materials created for the evaluation must have the abstract properties of materials modal for type 2, 3, and 4 learning settings, and yet be concretely new to most of the children in the evaluation. Faculty and students with the skill and imagination to design these materials can be readily identified at Teachers College, and the Project Director has had extensive experience in the design of curriculum approximating all three types proposed for the evaluation.

Some of the individuals involved in the design of the materials during the summer might become teachers in the fall tryouts and later in the evaluation itself. In any case, we are persuaded that the teachers who are to use the materials must have some involvement in their creation or at least in adding materials analogous to those that are provided for them, since in this way the teachers are most likely to come to understand the structural properties of the materials. The teachers can be identified in the early fall, probably three teachers for each of the two settings, and would be engaged in sensitivity and role training and curriculum development or refinement throughout the fall. The teachers would participate in the first full-setting trial in December.

The vans and buses both would be designed for observation, with audio and video recording equipment installed to provide maximum coverage of both. A booth with two one-way screens might be installed in the center of the van, and the driver's section of the bus might be enclosed to permit one-way observation. Three observers, to man the equipment and conduct live

observations, would need to be associated with each setting combination. The observers would probably start as coders in the summer and fall analysis of the current year's descriptive data, and would be further trained for observing in the fall before the December trial.

The projected six mapping schemes for the coding and analysis of pupils' behavior will provide the empirical basis for our judgments about the autonomy and integration of the pupils' observed behavior. The criteria for these judgments are developing concomitantly with our development of the mapping schemes themselves, and will be defined in relation to the autonomy and integration possible in each of the subsettings of the evaluation. A pre- and post-intervention administration of the Children's Concept of School Learning, or pupil-role, interview now being developed for the project by Roberts will provide data on the pupils' own interpretation of the evaluation subsettings and should provide another basis for judgments about the pupils' autonomy and integration.

(2) From everything that has been written so far in this section, it might be supposed that autonomy and integration could only be exhibited by pupils in their conformance to the norms of each proposed subsetting, granting that the differences in their capacity for this might be very large. Just, however, as we have stressed the contrasts between pupils' sheer conformance and role negotiation or construction, and between their routine and problem-solving activity, so it is essential here to distinguish in an architectural frame of reference between pupils' sheer conformance and their adaptation to the environment of their learning. True autonomy, and its counterpart integration, must be understood as that "critical capacity" which enables an individual to respond adaptively to a variety of situations, striking a balance between his needs and capacities and the demands and opportunities the environment presents. Autonomy defined

in this way cannot be measured by achievement alone nor even by straight frequencies of independent activities directed toward goals. Once dissected and disaggregated into component variables, the underpinnings of genuine autonomy are lost. Autonomy is a manner of response to settings which takes the form of a dialectic resolution of opposite tendencies. It is a means of achieving equilibrium, as a response to perturbation, and cannot, therefore, be assayed in terms that neglect the individual's judgment.

In each of the proposed subsettings it would be possible to present controlled situations that allowed us to observe pupils' adaptation to variations and stresses in the environment. In the convergent individualist subsetting, tasks could be presented in a form that permitted either unrelated episodes directed to short-term goals, or more discursive episodes directed toward the logic of the tasks as a system. Materials could be designed with inconsistent feedback, thus pitting the pupils' judgment against the criteria imposed on him externally, (a situation closely analogous to one deliberately employed in Engelmann-Becker classrooms). In the divergent individualist subsetting, opportunities could be presented to copy objects mechanically, or alternatively, to create models or transformations of the objects that revealed their meanings for the pupils. A wide range of situations like these above can be imagined for all of the subsettings. It would also be possible to introduce changes in the sound and light properties of the environment, in the accessibility of materials or space, or in the time available for an activity, all of which would test pupils' judgment and their awareness of the effects of the environment on their behavior.

Not only the children's immediate adaptations to these variations, but their subsequent discussions of them, in class or in interviews, should contri-

bute to our evaluating the degree to which the children can see the environment in a critical capacity. From studies of political socialization, it is clear that children in the early grades tend to respond to idealized notions of the political system. They seem unable to incorporate excesses and defects of government into their elementary, and necessarily skeletal, notions of society. Does the same principal apply in school programs in the early grades? Young children may perceive and respond to the logic of a program, e.g., token rewards for work, with scarce residual concern for the soundness of its application, i.e., whether it is performed successfully, excitingly or relevantly by the teacher. The greater the autonomy of the child the more he can respond critically to these real vs. ideal features of the world, and by extension, the more he can understand his own capacity to participate in or withdraw psychologically from contributing from the vitality of the program.

It will be exceedingly interesting to determine whether children perceive and can define the normative differences among the program "types" reflected in the setting (convergent, divergent, integrated), i.e., whether they can distinguish between the explicit or tacit expectations of authority, and the role of individual initiative in each of the diverse subsettings. Previous studies of children's awareness of the concomitant of social class have shown that they have but fleeting and inconsistent understanding of the origin of social class membership. It appears, however, that even before conceptualizing it, children quickly learn to adapt behavior and attitudes to social characteristics of people and settings, e.g., occupational status and economic status. It is important to determine the degree to which children are aware of their individual adaptation to the mandates of the school, and whether they feel they have choices in the matter. More specif-

ically, can the children identify those features of the school program or setting which contribute to the atmosphere of convergence, divergence, or integration?

E. Development of a children's concept of school learning
interview.

Joseph B. Roberts

1. Problem Statement

How can the influence of different classroom environments upon pupil role development be measured? Pupil-role development is defined in terms of role-taking (Turner, 1962) and can be measured in terms of a developmental interpretation of four variables in pupils' self reports on their role taking: normality of learning events, normality of their means-ends relationships, causality of learning events, and morality of rules governing learning events (Cicourel, 1964; Van Den Daele, 1968). The values of the pupil-role interview derive from a developmental interpretation of the specific content of normal learning events in a particular program seen from the standpoint of pupils; the association of differences in the children's interpretation of pupil-role from different learning environments with changes in their interpretation of the four-role-taking variables; differences in these children's interpretation of pupil-role with concomitant changes in the levels and ranges of their pupil-role development; and the potential of being able to use pupil-role interview data to predict optimal match between learning environments and individual pupils.

2. Related Research

Normality of Learning Events

The normality of learning events can be measured in terms of what pupils learn about and learn to do, events that they perceive as characteristic of their instructional program and what we ask them to interpret in terms of what they would prefer to learn (Dreeben, 1968; Van Den Daele,

1968). One assumption in this study is that the socialization of the child is not only into the general culture but also into various sub-cultures (Rose, 1962). Several ideal conditions in part appear to be necessary for pupil-role development. The first condition is that pupils operate on their experience, manipulatively and logically, through the use of their physical senses in activities that are moderately novel, in the sense of being considered alternately play and work, easy and hard or other basic differentiations the pupils might make (Inhelder and Piaget, 1969; Grannis, 1970). The present investigator wants to obtain data from pupils bearing on this ideal condition, but the data must especially emphasize the differentiation of normal learning events within the variations in the school, since variations in the school environment are the principal object of the study, not what happens outside of school. Equally important, data must be obtained from pupils indicating what they would prefer to learn in school.

Normality of Means-Ends Relationships

The normality of means-ends relationships can be measured in terms of how teachers, classmates, and materials help pupils to learn and pupils' perceptions of how they would like persons and materials/^{in class} to help them learn. Research in interactionist theory states that rational thought is a function of the breadth of experience--direct or vicarious--available to the individual (Warshay, 1962). This idea suggests to the present writer the following: when the teacher, a classmate, or a material is not available to help the pupil learn normal learning events, what options are available to the child and how could they help pupils to learn? Developmentally the early growth of logic in the child is governed in part by the beginnings of hindsight and anticipation (Inhelder and Piaget, 1969). This idea suggests that the pupil-role

interview data should be concerned with how teachers, classmates, and materials help pupils remember what went before and what must follow logically. According to Van Den Daele (1968), "Knowledge which eventuates in cognitive change is twofold: knowledge or relationship 'as it is perceived, defined, or imposed,' and knowledge and relationship 'as it might be'."

The Causality of Learning Events

The causality of learning events can be measured in terms of the origins of the goals and rules of learning and conduct in the classroom, from the perspective of present and preferential opportunities for self-responsibility. Indeed, Coleman (1966) reports that a child's sense of control over his environment is positively related to that child's academic achievement. More specifically, Shore (1967) finds this sense of control positively related to perceived parental acceptance. Such items as the following appear on his Perceived Parental Acceptance - Rejection (Warmth) Scale;

1. Often speaks of the good things I do.
2. Reversed item: Gets cross and angry about little things I do.
3. Almost always speaks to me with a warm and friendly voice.
4. Reversed item: Almost always complains about what I do.
9. Always listens to my ideas and opinions.

Nagler and Hoffnung (1971) state that the results of their study, on children's sense of powerlessness, school performance and teacher characteristics, indicate a relationship between classroom designation and perceived control of school environment. Certainly, in Van Den Daele's discussion of Baldwin's view of cognitive development theory, this sense of control is essential: "the dispositions to action of the person advance from 'dependence upon fact to dependence upon ideas; from things as conditioning conduct to ideals as means; from objective necessity to the hypothetical imperative'. Control becomes internally directed rather than

externally determined. At the same time, the person proceeds from conformity to custom to commitment to personal ideals."

Morality of Rules Governing Learning Events

The morality of rules governing learning events can be measured in terms of the learner's perception of consequences of conformance to and departure from the rules of learning and conduct in the classroom. Turner (1962) claims that as the context (of the environment) approaches one in which behavior is completely prescribed and all misperformance is institutionally punished, the process of role-taking-role-making becomes increasingly an inconsequential part of the interaction that occurs. In Van Den Daele's discussion of moral judgment and self-ideal development, he reports on the principles children use as bases for their moral judgment. Citing Kohlberg, he reports three major stages of moral judgment development which are a function of age. "In the first stage, children's responses are dictated by fear of punishment or desire for 'fun'." The responses indicative of the second stage are predicated upon a naive interpretation of role demands. In the final stage, judgments are founded upon 'democratically accepted law' or principles of individual conscience.

3. Target Questions

Pupil-role development involves role-taking, and role-taking is in part a function of how a specific learning environment is perceived, defined, or imposed and how the pupil would prefer the environment to be (Van Den Daele, 1968). The more restricted the perceived environment, the less role-taking-role-making can occur. The theoretical rationale of the study can be stated in terms of the following questions.

The present study seeks to obtain empirical evidence to answer the following questions:

1. Is there a positive relationship between pupil-role development and pupil age?

2. Does a change in the pupil's perception of role reflect a changed perception of the role of teachers, classmates, materials?
3. Is perceived intrinsic pupil acceptance positively related to the level of pupil-role development?
4. Does pupil-role perceived by girls have a higher developmental level than pupil-role perceived by boys?
5. Does pupil-role perceived by girls have a wider developmental range than pupil-role perceived by boys?
6. Is the perceived breadth of pupil-role positively related to the range of pupil-role development?
7. Is the optimal level of the learning environment one developmental level above that of pupil's?
8. Do pupil-role data correlate with CCEP matrix data?
9. Do pupil-role data positively correlate with Ego-Ideal Interview data?
10. Is pupil role development of lower class children in integrative learning environments the same as that of middle class children?

Hypotheses:

1. There is a positive relationship between pupil-role development and pupil age.
2. A change in the pupil's perception of role positively reflects a changed perception of the role of teachers, classmates, and materials.
3. Perceived intrinsic pupil acceptance is positively related to the level of pupil-role development.
4. Pupil-role perceived by girls has a higher developmental level than pupil-role perceived by boys.
5. Pupil-role perceived by girls has a wider developmental range than pupil-role perceived by boys.
6. The perceived breadth of pupil-role is positively related to the range of pupil-role development.
7. The optimal level of the learning environment is one developmental level above that of pupil.
8. Pupil-role data positively correlate with CCEP matrix data.
9. Pupil-role data positively correlate with Ego-Ideal interview data.
10. Pupil-role development of lower class children in some integrative learning environments is the same as that of middle class children.

5. Anticipated Procedure

The above stated hypotheses suggest three possible plans for the collection of data. Plan one relates to pupil-role development as a function of age and requires collection of data from different grade levels. Plan two relates to pupil-role development as a function of learning environments and requires collection of data from different programs of instruction in the Follow Through Project. Plan three relates to pupil-role development as a function of optimal match between learning environments and pupil-role development and requires the pre-test-posttest control group design envisioned for the 1971-72 Follow Through evaluation. Further theoretical and practical information is needed to order and coordinate these plans. Such information will in part be obtained in consultation with Leland Van Den Daele and Lawrence Kohlberg. Irrespective of which plan or combination of plans is followed the Pupil-Role Interview Schedule will have to be revised.

Procedural Problems in Collection of Data

At present, the pupil-role interview schedule takes an hour to administer. With the administration of an ego-ideal interview as well an hour and a half would be required. The present writer has already had to interview children in two separate half hour sessions on two separate days. In consultation with Van Den Daele and Kohlberg, the writer has become aware of the necessity for building ego-ideal probes into the present interview schedule. Working sessions have already been planned with them so as to resolve the dual problems of shortening the schedule and strengthening its developmental aspect.

A Brief Report on an Exploratory Study

The present author conducted an exploratory study in the Love

Community School in Wilmington, Delaware. He selected two boys and two girls from each of six classrooms: an Open Classroom, a Bank Street Classroom, and a Traditional Classroom in the first and second grades respectively. Due to the limitations of the sample and the exploratory design, no warranted conclusions can be reached. However, two persons analyzed the interview data and found that pupils' responses could be differentiated in relations to their classroom environments and could be interpreted in relation to Van Den Daele's dimensionalized characteristics of ego-ideal development.

Of course, in the process of developing the interview many more children have been interviewed this year. The author and other members of the project have talked informally with the subjects of the behavior stream observations in those locations where one or another of us has been present on the day following the children's observation. Most recently, the author has been interviewing children in an Englemann-Becker school in New York City.

Sections (1), (2), (3), and (4) of the following interview get at children's views and interpretations of different aspects of the learning environment in their schools.

Section (5) of this interview will be integrated with (1), (2), (3), and (4), and some of the less essential probes will be eliminated.

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- P₃ What does the teacher do to help you learn about something/ to do something? (Lead list from notes and ask following questions) How?
- P₄ Can you learn anything in school without the teacher? (1) (2) When, is the teacher doing something else while you're doing something? How? (3) When there is a teacher doing something with you, is there anything else in the classroom that helps you learn? How? (4) Can other children in the classroom help you learn? How? (5) Does your teacher know what you're learning? How?
3. Have any new children come into your class this year? (If answer is "yes" then say, "Suppose a new boy/girl comes to your room? How did he find out what to do in your room?
- P₁ Does everyone do the same thing at the same time? (Refer to notes for examples)
- P₂ Can he do anything he wants to anytime, always?
- P₃ (Go back to the first used activities for the following probes.) Can he start something (refer to notes) any time he wants to?
- P₄ How does he know when to start something?
- P₅ How does he/she know when he's finished something?
- P₆ Is there only one way to do it, or is there more than one way?
- P₇ How will the teacher know when he needs help in this (something)?
4. When children are working (refer to notes) are there any rules they have to follow? Examples?
- P₁ Can children talk to each other in class? Examples? Are there any rules you have to follow? Examples? Why? (1) Can they do it anytime they want to? (2) Is there a wrong way or a good way to do this? (Examples) Why?
- P₂ Can children walk around? Examples? Are there any rules you have to follow? Is there a wrong way or a good way to do this? Why?
- P₃ Can children answer questions for each other? Examples? Are there any rules you have to follow? Is there a wrong way or a good way to do this? Examples? Why?
- P₄ Can children use things other children use only? (Refer to notes) Is there a wrong time or a good time to do this? (Examples) Why?

P₅ Can children leave something they are doing without finishing it? (Example) Is there a wrong way or a wrong time to leave something you haven't finished? Why? Example?

5. What would you like to be when you're grown up? (If child says, "I don't know," say, "I know you don't know but let's pretend that you do. Tell me what you want to be when you're grown up") What do you have to learn in school to be that? (Refer to notes.)

P₁ Have you told me about most of the things that you'll be learning when you're grown-up that you are not ready to learn now?

P₂ Repeat P₁ until child says, "Yes."

P₃ Will what you're learning now help you learn (that something) later? How?

P₄ How will your teacher help you learn?

P₅ When you're grown-up, will you learn anything in school without the teacher? Example? How?

P₆ Will others in the class help you learn? Who? How?

P₇ Will your teacher know what you are learning? How?

P₈ Will you really want to learn these things that you're telling me about when you're grown-up? Why?

F. Questionnaire and interview study of the social context of the classrooms observed this year.

Walter Furman and Peter Shaw

Introduction

The basic interest of CCEP in the classroom roles of teachers and children suggested to the investigators that a study of the extra-classroom social system might profitably detail the organizational patterns and social norms that are brought to bear on the classrooms sponsored by Follow Through. The basic notion underlying this aspect of the research is that a school, or a Follow Through project, is a system of social relationships that conditions in many respects the relationships of teacher and pupil in the classroom. Teachers run classrooms the way they do for many reasons, including factors of personal background, personal norms, staff relations, staff norms, administrative supervision, and personal qualities of the children in the class. In order to investigate some of the questions pertaining to these effects, a survey of teachers, aides, and parents was designed, and interviews were conducted with the local Follow Through administrative and support staff at each of the sites that the CCEP visited. These procedures have also been adapted for a study of three comparison classrooms and their contexts, not in the Follow Through sample.

The school personnel survey of CCEP is concerned with an analysis both of the organizational patterns of each Follow Through model and also of the attitudes of the participants within those models. The autonomy and compliance structures present within the organization (cf. Etzioni, 1961, and Katz, 1964) are the main foci for the organizational studies, while the role definitions of teachers and aides, vis a vis each other,

children, administration, and parents, are the main foci for the survey of individual attitudes. This progress report of the social system component of CCEP will deal with the instruments finally developed to tap these dimensions, the basic survey design, and the data gathering activities undertaken since the time of the last report.

Survey Design

The design of the CCEP survey study can, at this point, be conveniently summarized into the five following components.

1. The analysis of organizational and classroom practices from (1) sponsor's specifications, and (2) local project proposals.
2. The analysis of local project history and political milieu from interviews with the Follow Through administration.
3. The analysis of within school organizational practices from two perspectives: (1) the reports of teachers and aides, and (2) the reports of local Follow Through administration. "Organizational practices" comprise for us the training, observation, and evaluation procedures and standards that are applied to the teachers and aides within a Follow Through project.
4. The analysis of the in-school role relations of teachers and aides from two points of view, both derived from questionnaire items: (1) A relatively comprehensive record of the perceived qualities of teachers' and aides' relationships to each other, staff, parents, and non Follow Through school personnel. (2) A set of normative, or prescriptive, statements from teachers and aides regarding their conceptions of proper teacher-pupil, teacher-staff relationships.
5. The comparison of the survey results on items 1-4 above with

characterizations of classroom practices developed directly from classroom observations

An appropriate scheme for conceptualizing the formal types of data being collected by the CCEP survey is that of Lazarsfeld and Menzel (in Etzioni, 1966). Lazarsfeld and Menzel differentiate between three properties used to characterize collectivities. "Global" properties of the collectivity are those which are not based on the properties of individual members, "Structural" properties are based on data about the relations among members, and "analytical" properties are based on data about the properties of each individual member. The global properties of the Follow Through projects we tap through documentary analysis of proposals and through our interviews about the idiosyncratic local history of the project. The structural properties of the projects are tapped at length in both the staff interviews and teacher and aide survey instruments, and the analytical properties of the units we derive from (1) personal background data collected by the survey and (2) individual norms regarding a variety of aspects of their performance in Follow Through.

Normative Concerns of Survey

The normative dimensions of both teachers' and aides' role relations that are developed and queried in the survey instruments derive mainly from the Second Progress Report's analysis of classroom structures.

The teacher-pupil relationship is characterized in terms of the respondent's norms for teacher direction as against student autonomy in the classroom (Wehling and Charters, AERJ, 1969), and also by the preferences the teachers and aides evince regarding the various possible types of pupil learning outcomes in elementary school. These outcomes (cf. CCEP Teacher

Survey, question 33) are derived directly from the properties of several points on the Grannis matrices.

The other normative issues raised in the survey instruments are as follows:

1. Preference regarding the origin of materials used in the classroom.
2. Preference for teacher independence from supervision by the school principal.
3. The teacher's acceptance of overall responsibility for the child's progress in school.
4. The norms which teachers and aides call upon in evaluating their own effectiveness.

It is proposed that the normative role set of teachers and aides in Follow Through, aside from its inherent interest and its use in cross project comparisons, can be related to the organizational practices and structural properties of each model and project. Furthermore, the comparison between classroom observation data and survey data will rely heavily on the juxtaposition of normative claims advanced by teachers and our observations of their actual practices. Lastly, it seems clear to the CCEP survey staff that the analysis of the important organizational and educational innovations present in Follow Through in terms of the traditional "sociology of work" of the teaching profession may in fact illuminate substantial factors affecting the future diffusion, acceptance, and implementation of these models.

Pretesting

A major activity of the CCEP survey staff during the months since the last progress report was the pretesting of the instruments appended to the last progress report, and refining and finalizing those instruments

for administration as of the present. The survey instrument for the teachers now in use is similar in content to the draft submitted with the second progress report, and the main changes that were made on that instrument were to simplify formats and wordings where possible. The major addition on that instrument was to include a checklist of relational possibilities between a teacher and her aide and to ask the teacher to characterize her relationships with her aides in terms of those possibilities. This list is identical with a list we administer to the aides, and it is our hope that a mutual characterization of the teacher-aide role relationship can be arrived at for each program, and for each school within each program, that is within the CCEP's sample. The revised teacher and aide questionnaires are appended to this report.

The aides questionnaire needed extensive revisions. Our pretesting showed us that a self administered instrument roughly paralleling the teachers questionnaire was inappropriate for many of the aides in all the models, so we were forced to simplify many of the items on the original instrument, change many multiple scale response questions into checklists, and to provide for a group questionnaire administration. Our final method of administering the questionnaire to the aides is to have a group meeting conducted by either a member of the CCEP staff or by a staff member of the local Follow Through project. At this meeting the aides are given as much help as they need to understand the questions and complete the form, and then they mail the forms directly to Columbia, thereby, we hope, preserving the anonymity of their responses. The subject matter concerns of the aide survey are parallel to those of the teacher survey, and it is planned to analyze comparatively the responses of teachers and aides within model, school, and

grade level cohort. The analysis of relational data of the actual dyads, however, by matching pairs of interacting teachers and aides, is not a part of the design of this survey, and we must confine our analysis to the comparisons of variously matched cohorts.

Administration of Instruments and Sample

The data collection activities of the CCEP survey have been underway since about the beginning of March and are forecast for completion somewhere early in June. The survey sample is all of the Follow Through teachers and aides in each of the schools where the classroom observations are conducted. In addition, in order to expand the sample at certain sites for purposes of effective survey analysis, the local project directors and staff have been requested to administer our teacher and aide instrument to teachers and aides in schools other than the one which housed the "exemplary" classroom. To date, we have received exemplary cooperation from the local staffs we have worked with. Table I shows the sample size in the sites at which the questionnaire are currently out for completion. At two sites the questionnaires have not yet been given to the teachers and aides, although the contacts with the Follow Through staff have previously been made. It is not now possible to give a reliable estimate of response rate, although it is our feeling that / extremely amicable relations have been established with the Follow Through staff during our visits (with, of course, the inevitable exception) and, in general, our hopes are high. The selection of three comparison schools is now in process, and they will definitely be used for purposes of survey comparison.

TABLE I - SAMPLE SIZE

<u>Sponsor</u>	<u>City</u>	<u>No. of teachers</u>	<u>No. of aides</u>
Engelmann-Becker	Dayton	15	14
Engelmann-Becker	Smithville	7	16
Engelmann-Becker	East St. Louis	8	20
Bushell	Philadelphia	18	18
Bushell	Trenton	24	24
Bushell	Bronx (to be administered)	8	8
Bank Street	Tuskegee	12	24
Bank Street	Plattsburgh	10	10
Bank Street	Wilmington (to be administered)	?	?
Comparison Schools	as yet unselected	?	?

Calendar for Analysis

As previously stated, it is expected that the survey data gathering activities will be completed around June 15, 1971. Concurrent with the job of securing an adequate response rate, we are now turning our attention to the task of beginning the processing of the data. While most of the items on the teacher and aide questionnaires are precoded, there remains 6 and 5 items on the respective questionnaires for which codes must be constructed before the final tabulations can proceed. A sizeable sample of the total expected responses must be in hand before these codes can be finalized. Once an adequate response rate has been achieved, we can forecast approximate dates for the remainder of the analysis. Our necessarily approximate predictions

are as follows:

June 15, 1971 --completion of data collection
completion of codebooks

June 21, 1971 --coding completed, codebooks revised

July 1, 1971 --punching completed, data on tape

July and August --inspection of marginals, isolation of key variables
preliminary analysis

August 31, 1971 --report of preliminary data analysis in CCEP progress
report #4

September, 1971-June 1972 --intensive analysis of survey data, integration
with CCEP in-classroom analyses, Final Report.

Rationale and Design of Parent Study

Purpose of the parent study: Introduction

The CCEP parent study was designed to provide information about what we felt was the most important source of expectations transmitted to the child that would affect his performance in the classroom. In our basic conception of autonomy and integration as properties of role relationships, we were interested in comparing the quality of the child's role relations within the class to the quality of his role relationships in the other great socializing institution, the family. To this end, we prepared a survey instrument for the parents that would investigate their relationships with their child, and the reciprocity between school and home, i.e. what messages were being transmitted, how, and with what effect on each of the institutions. The scope of our survey was necessarily limited by budgetary restrictions, but we are confident that the data we have collected will provide important background data for understanding the impact of each of the Follow Through models we have examined.

Categories of Questions on the Parent Questionnaire

Our procedure for developing the parent instrument was to first sample a group of parents from each of the models in our sample with the use of a broadly open ended interview-discussion. This procedure was followed from September to November of 1970, and the interviews were tape recorded. These interviews were analyzed along the following dimensions; (1) what issues were salient in the parents understanding of the child's classroom, (2) what issues showed consistent differences by Follow Through model, and (3) which issues of family life proved relevant to the picture of classroom life that the classroom component of CCEP was building. The concerns outlined below, those which are subjected to a

number of questions in the final parent instrument, result from the application of the criteria above to our findings in the Fall pilot study.

(1) Parents evaluation: cognitive and behavioral

A first major concern of the parent survey is the investigation of the parent's evaluation of the Follow Through educational program. We attempt to get a differentiated picture of what the parents like and dislike about the program. For instance, satisfaction with the cognitive progress the child is making is differentiated from satisfaction with the type of 'behavior' the child is learning in school.

It is hypothesized that different models will activate different sources of approval and disapproval from within the parents' value structure. Contrasting sources of approval and disapproval can be used as indicators of the parents' interpretation of a program and its match to their criteria of evaluation.

(2) Message from School to Home

The question of how parents' interpret the model they are confronted with is of major interest to the CCEP survey staff. The salient characteristics of each model as perceived by the parents, when compared with a more objective picture derived from in-classroom research, raises the issue of what systematic biases there are in the parents' perception of the child's education. The systematic nature of these biases is all important. By analyzing what messages go from the school to the home, and by what mechanisms these messages are transmitted (e.g. by the child, or the PAC, or by classroom visits), we can perhaps determine the sources of the parents' picture of the school. Furthermore, when we compare the values expressed by the parent for his child and the type of

social authority exercised in the home with the implicit values and social organization of the classroom, we can then arrive at a measure of relative match or mismatch between the two value systems.

(3) Reciprocal Influence

We are also interested in getting at the extent of reciprocal influence of two behavioral environments on the child, the school and the home. In the survey instruments are included questions which gauge the degree of autonomy given the child at home, which we hope will give us an indication of how the behavioral aspects of the Follow Through are supported or subverted by the home. Conversely, questions relating to parents' perception of the models influence on child's behavior can tell us something of how the home environment has been altered by the model.

(4) Aspirations

Questions relating to parents' attitudes towards the child's future were included, both aspirations and what was thought undesirable, and measures of how likely parents thought each course was. We hope to determine whether parents tie their aspirations to education in general, and to Follow Through specifically.

(5) Community Pictures

Seven questions, three of them open-ended, attempt to bring out a picture of the concerns and social conditions of each community and the ways parents see these concerns affecting children, the home environment, and the school. Together with our interviews with PAC staff, these community portraits can hopefully allow us to account for how characteristics of specific communities affect our data.

(6) Interviewing and Sample

Interview techniques used in the administration of the questionnaire

are elaborated on in the section "Experiences of the Parent Interviewer" - in most of the cases one person did the interviewing herself. Only parents' of the children in classrooms observed ⁱⁿ the classroom environments section of the project were interviewed, and in most cases limitations of time and budget precluded the possibility of interviewing the parents of all children in each classroom observed. While we feel that that the consistency of questionnaire administration personnel and manner is an asset, we realize that small sample size and failure to include all the parents from each classroom put definite limits on the generalizability of our findings. Our intention is therefore to concentrate on integrating survey findings with classroom observations.

Preliminary Analysis of Parent Interview Data

Peter Shaw

Primarily as an exercise in developing a codebook for the parent questionnaire and obtaining a first indication of the fit of theory to actual responses, two open-ended questions were coded and marginals tabulated for the three Follow Through systems surveyed to date. The first question was an attempt to get an image of the classroom which each system was conveying to the parent; "Can you briefly describe what happens in the child's classroom to me in your own words?" The universality of the question and the predictable diversity of responses made it challenging to isolate concepts, but a few marginals are perhaps noteworthy. In this brief preliminary discussion we have stratified by Follow Through model alone, and have not attempted to introduce other pertinent variables such as school systems and income groups, as such cross-tabulation is not possible until coding and punching are completed.

The first and most obvious question which arose was whether the parent actually had any picture of their child's classroom at all:

Table 1. Per cent of parent able/unable to detail any classroom characteristics:

	Bank Street	Bushell	E-B
Able	97%	95%	83%
Unable	3%	5%	17%
	<u>100%</u>	<u>100%</u>	<u>100%</u>
Total Number	35	40	40

Next, simple counts were made of specific aspects of the classroom environment mentioned by parents, ranging from specific academic subjects to grouping of pupils to teaching and learning styles if specifically cited by parents as characteristic of Follow Through classrooms. For instance,

the answer, "I know they write stories, do arithmetic and have a play period. They are very active," would be given a score of 4.

Table 2. Average number of classroom characteristics cited per parent by model

Bushell:	4.4 citations per parent
Bank Street:	4.0 "
E-B:	2.8 "

From this, it appears that the Bushell model, at least in sheer quantity of specific details transmitted to the parents, achieves a higher output of replicable information than the other two models. At this point, it is important to stress again the marginality of such findings and to note the small size of the sample surveyed. We are dealing here with a highly specific and limited parent population, and merely pointing to a few preliminary, but interesting gross statistical relationships.

The content of answers to the question about classroom activity was often phrased partly in terms of subjects taught or specific leaning activities. Preliminary to investigating this specific aspect of the responses, we tabulated the answers to two precoded questions dealing with parents' attitudes towards the cognitive content of the programs. These two questions were answered as follows:

Table 3: "In your opinion, is the child learning more, about the same, or less than other children of his age?"

	Bank Street	Bushell	E-B
More	62%	66%	69%
Same	30%	27%	28%
Less	8%	5%	3%
D.K.		2%	
	100%	100%	100%
Total number	35	40	40

Table 4: "How helpful is (Follow Through) to child's learning- very helpful, somewhat helpful or not helpful at all?"

	Bank Street	Bushell	E-B
Very helpful	91%	90%	92%
Somewhat helpful	9%	10%	8%
Not helpful at all			
D.K.			
	<u>100%</u>	<u>100%</u>	<u>100%</u>
Total Number	35	40	40

Responses to these two questions dealing with parents' attitudes towards the cognitive aspects of the three models do not appear to vary according to model. However, distinctions did emerge regarding the specifics of classroom activity mentioned by parents in each of the models. The table below represents a condensation of a more sensitive index, but points up interesting divergences in the models in three basic subject/activity categories as perceived by parents: 1. arithmetic, reading, and writing. 2. three other subjects, spelling, language, and science, and 3. three more integrative activities - art, play, and cooking.

Table 5: Per cent of parents reporting three types of classroom activity, by model.

	Bank Street	Bushell	E-B
arithmetic, reading, writing	74%	70%	53%
spelling, language, science	57%	5%	33%
art, play, cooking	57%	35%	13%

From this it appears that the Bank Street parents surveyed saw their children's curriculum as relatively strong in both traditional subjects and more integrative activities, while Engelmann-Becker parents did not feel very compelled to discuss classroom activity in these terms. Even at this preliminary stage, we were interested in examining what impact, if any, parents had seen the program as having on their children's behavior, and what they thought of the behavioral aspects of Follow Through education. The question "How satisfied are you that the child is learning the proper type

of behavior in school this year?" had the following response:

Table 6: Parents' satisfaction with behavior learned in school, b program

	Bank Street	Bushell	E-B
Very satisfied	49%	60%	50%
Satisfied	51%	33%	49%
Somewhat dissatisfied		5%	
Very dissatisfied		2%	
Not sure			1%
	<u>100%</u>	<u>100%</u>	<u>100%</u>

On this question then, it appears that Bushell parents are rather more willing to express their approval for the behavioral aspect of their Follow Through model than the other two parents groups.

The second open-ended question we examined at this preliminary stage followed from the above question and asked parents to explain their reasons for the degree of satisfaction they expressed regarding behavior learned by child in school. Only the positive responses were dealt with, but these were very complex indeed. As was the case with the question on classroom activity, the categories represented derive from more complicated measures, but perhaps provide some index of the parents' relative perception of each model's behavioral emphasis.

Table 7: Per cent of parents citing various behavioral aspects of Follow Through programs as positive effects on child's behavior* (see note, bottom of page for derivation of categories)

	Bank Street	Bushell	E-B
<u>Other-oriented</u>			
dominative	43%	30%	24%
cooperative	23%	20%	27%
<u>Self-oriented</u>			
cognitive	11%	18%	30%
individual	20%	15%	10%
<u>Generalized approval</u>	29%	36%	20%

This table indicates the possibility that Bank Street parents see the child's capacity for response to adult authority figures as an important part of the program while also maintaining that the child has also increased independence. Engelmann-Becker parents appear to be the most impressed by their children's improved cognitive skills, or attitudes toward learning, while this aspect of Follow Through is least pronounced for Bank Street parents. All programs are about equal in their approval of child's improved relations with peers and siblings along the cooperative dimension. Bushell parents scored higher in their generalized approval of Follow Through's behavioral effects, and in this way correlate with their satisfaction expressed with child's behavior in Table 6: They approve of the effects of the program but their rationale cannot be dramatically isolated as shown in Table 7.

Indications in this preliminary marginal analysis are simply not statistically or methodically sophisticated enough at this stage to allow us to make any correlations from the above analysis to the theoretical formulations of the classroom analytic component of the CCEP. We feel we can only note a few characteristics of each of the models; the Bushell model receives a high

* The categories used in this table were derived as follows: In the dominative category were pooled all responses referring to improved response to authority on the child's part, both in the home and at school, as seen by the parent, eg. "He shows me more respect." The cooperative category included all references to child's improved relations with others both in and out of school, eg. "He gets along better with children his age." In the cognitive category were included references to the child's improved performance in or attitude toward his school work. Individual refers to remarks on child's perception of himself (eg. "Shows more self-respect.") or degree of autonomy ("is independent"). In the generalized approval category were included the numerous vaguely worded positive evaluations of child's behavior (eg. "He is nicer"). The general categories of "other oriented" and "self oriented" were postulated to distinguish between behavior in which the child was reported as relating to others and that in which his own motivation and self concept were reported as evident to parents.

degree of generalized approval from parents for both its cognitive and behavioral aspects, and seems to communicate the specifics of classroom practice across to the parents well. The Bank Street parents surveyed seem to be able to point out slightly fewer specifics of the classroom (Table 2) than Bushell parents, but see the activities they can identify as more diverse in nature than parents in the other two systems (Table 5). The Bank Street parents also appear to value what they see as behavioral consequences of the program - a higher capacity in the child for accepting directions as well as more independence. Engelmann-Becker parents surveyed are least able to cite the specifics of classroom practice (Tables 1,2). What they do think of as classroom practice is oriented toward academic subjects (Table 5). Correlative with this, they are most impressed behaviorally with child's improved ability to learn (Table 7).

In respect to Bank Street and Engelmann-Becker models, this raises a possible topic for analysis when surveys are translated into hard data and cross-tabulation becomes possible, namely, could Engelmann-Becker parents' heightened perception of children's learning abilities, gained through take-homes, for instance, account for a lessened concern for specific classroom practices, while Bank Street parents' perception of the variety of the learning environment could mask a lesser understanding of the actual learning dynamic of the classroom.

Such issues cannot be investigated until the parents in the three control schools have been surveyed, and all the responses have been translated into data.

The Experience of the CCEP Parent Interviewer
- Questionnaire Construction -

Carole Oligario

The present parent interview form was devised from the schedule used in the parent interviews taperecorded in the fall and from research into different types of parent questionnaires previously used. The questions were created in an attempt to get at what the parents were thinking about their child's learning, and how the home environment and parent attitudes affect the question of autonomy, vis a vis the child. A more extensive presentation of the rationale and design of the parent survey is presented in a separate section of this report. Here, the parent interviewer wishes to report her experiences in the construction and administration of the questionnaires.

The experience of the fall study showed the interviewer that parents resented having words put into their mouth, and that the responses of parents to open questions often were rich in both feeling and information. One of the primary goals in the construction of the present questionnaire was the retention of the spontaneous responses evident in the taped interviews. Our inclusion of 19 open ended questions on the final interview form has proven invaluable in this regard.

Simplicity of question wording and format was another overall consideration in the construction of the questionnaire. From the tapes, it was evident that academic wording or language removed from the parents own personal experience proved to elicit slight suspicion, withdrawal, and generally less open responses. Our attempt was to simplify the language to the fullest extent possible while still retaining the sense of a question, but even now there are questions for which the interviewer must supply an on-the-spot interpretation. The fact that virtually all of the

interviewing is conducted by one staff member, Oligario, ensures the necessary comparability of question interpretation.¹

Arranging the interviews

During the Fall pretest stage of the CCEP study, due to greater availability of both time and money, arrangements for contacting communities and schools were handled personally a week prior to the scheduled interviews. During that period, the interviewer was able to arrive at the designated site one week prior to the rest of the project, and at that time could establish contacts with the parent worker and PAC chairman. Also, at that time the interviewer could get a sense of how the child spent his day in school, as well as a sense of what were the general concerns and interests of the particular community in question. Interviews could be arranged by geographic location, not by class lists, and thus travel time between interviews could be saved. In the Spring, it was not possible to make personal visits to the communities prior to the actual interviewing days, and as a result, occasional mixups and misunderstandings occurred.

The importance of the preliminary personal visit was underscored this Spring when class lists, in alphabetical order, were secured from the local project personnel over the phone. As an outsider in New York, it was impossible to know which addresses were closest to each other, and appointments were, at first, made by chance. The frustration of this procedure quickly led to the adoption of another method of arranging the interviews: mainly establishing telephone rapport with the Parent Worker or Social Aide in each community and clarifying the necessary details of interviewing procedure: locale, timing and transportation herself would

¹At one site, a rural Appalachian town, populated by whites, the interviewing was conducted by the project director after consultation with the regular interviewer about question interpretation. In another small 'white' city, the interviewing was conducted, without any noticeable adverse affects, by the regular staff interview, who is black.

offer to set up the interviews. In that case, letters of introduction to each parent would be sent directly to her from New York. This letter informed the parents both of the classroom observations we were doing and of our intention to interview them personally, and it offered parents the option of refusing to participate in the study if they so desired. At the same time that these letters of introduction and explanation were sent to all of the parents of the children in the sampled classroom, a package of "Interview appointment letters" was sent to the parent worker, who would then send each parent the specific appointment time and date for the interview.

This technique of establishing rapport and arranging the interviews was completely satisfactory at most of the sites. However, in one community, the Parent Work agreed over the phone to set up the appointments, but when we arrived at the school, the PAC chairman informed us that there would be a fee for these services, since Stanford had paid them by the hour. Even having appointments set up in advance by the community contact was often not the end of the problems. Oftentimes upon arrival new appointments had to be made or rescheduled simply because of a misunderstanding in our telephone communication. In addition, some parents were consistently just not home, or didn't keep appointments, or were just afraid of being interviewed.

Impressions of the Interviews

Interviewing the parents in each community was very interesting. It was surprising to find that they were often very isolated from the school, and that the interviewer was the first person from the official school world who had actually talked to them individually. Establishing rapport with the respondents was in general no problem. Their first

reaction seemed usually to be relief that the interviewer was black, since on several occasions the parent workers, who hadn't yet seen the interviewer, had indicated to the parents that a white person would be coming to their home.

At only two sites, both large, urban ghettos, was there any hostility and/or cooperation between the CCEP interviewer and the local parents. The political atmosphere at both of these places tended towards black militancy, mistrust of research, and reaction against the prior intrusions (as we were told) of the Stanford people. Yet even in these communities, the basic response of the individual parents was cooperation.

The experiences of the Fall had given the interviewer the impression that communities in ghetto areas of large urban centers were usually the most politically aware and more anxious to capitalize on the organizing possibilities that the PACs in each model offered. These impressions were confirmed in the Spring, and in some urban communities PAC had evidently become powerful enough to negotiate with somewhat alien administrations of the models over aspects of the programs they thought inappropriate to black communities.

Without reference to specific data, the interviewer's impression was that the degree of knowledge parents had about each model was limited to the more innovative or visible aspects of the program: cooking, take-homes, tokens, trips, etc. Another impression of the Fall, confirmed in the Spring, was that the very existence of Follow Through as a "special" program has created a certain sense of importance in the parents' minds about the child and his school, regardless of what information was really made available to them.

Parents in all the communities seemed generally to respond eagerly to the following questions:

- #10. Can you briefly describe what happens in (child's) classroom to me in your own words?
- #15. Why are you satisfied/unsatisfied with behavior child has learned in school?
- #16. How helpful is this school program to child's learning?
- #30. How often does your child talk about school and what goes on there?
- #31. Name some things your child likes about school?
- #35. How often do you help child with homework?
- #52. What are the major problems in this area (community) as you see it?
- #59. Name if any three most important rules in the home?
- #60. What does your child have to do to get spanked?
- #67. What are the most important values you teach your child - to obey orders, to think for himself, be curious about things, be neat and clean, have good manners or be considerate of others? Pick 2.
- #76. What do you want your child to do or be when he "grows-up"?
- #84. What job would you not want your child to have when he grows up?
- #88. What do you really like about the school program your child is in this year? List.

Conclusion

What remains fascinating to the interviewer is the correlation of the parents' perceptions of the child and his actual classroom experience. The analysis of the parent interviews should provide the CCEP with a fairly comprehensive picture of the child's home life that can be useful for an understanding of the child's behavior in school. The interviewer also believe that the questionnaire was an effective instrument in getting at the picture parents had of each Follow Through model.

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Appendix

Teacher and Aide Questionnaires for
Columbia Classroom Environments Project

1. What grade do you teach? _____
2. What is the name of your school? _____
3. For how many years have you been a teacher? _____
4. For how many years have you taught in Follow Through? _____
5. For how many years have you taught at your current grade level? _____
6. How many things influence a person's coming to a particular teaching position. Circle the number beside each item that best represents how important that reason was to you in coming to your present job.

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not at all Important</u>
1. Wanting to work in this program	1	2	3
2. Wanting to work in this school	1	2	3
3. Hearing about the job from acquaintances	1	2	3
4. Hearing about the job from a local agency	1	2	3
5. Assignment to the job by a local education agency	1	2	3
6. Staying on as a teacher in the school when a new program was introduced	1	2	3
7. Other (please specify) _____ _____ _____	1	2	3

7. How many children are officially enrolled in your classroom? _____
8. How many children are present in your classroom on an average day? _____

9. Below are some of the ways by which a teacher learns how to conduct a classroom in a manner that he himself likes and which is also in accord with the philosophy of the school or program he is working in. Please circle the number beside each item that best represents how important you feel that item was to you in learning how to conduct your present classroom.

	<u>Very Important</u>	<u>Quite Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
1. Regular In-Service Training	1	2	3	4
2. Special seminars or training sessions prior to beginning the job	1	2	3	4
3. Knowledge gained from other teachers	1	2	3	4
4. Knowledge gained from aides	1	2	3	4
5. Teaching methods courses	1	2	3	4
6. Recollection of your experience as a student	1	2	3	4
7. Supervision and feedback from the administration	1	2	3	4
8. Your readings in books about education	1	2	3	4
9. The reaction of children to the techniques you tried out	1	2	3	4
10. Practice teaching	1	2	3	4
11. Other things (please specify)	1	2	3	4

10. How many teachers and aides normally work in your classroom?

_____ teachers _____ aides

IF YOU ARE THE ONLY ADULT IN THE CLASSROOM, PLEASE SKIP TO QUESTION 15.

11. How satisfied are you with the way teacher(s) and aide(s) work together in your classroom? Circle the number beneath the answer that best represents how you feel about this.

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Slightly Satisfied</u>	<u>Slightly Dissatisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4	5	6

12. If more than one adult works in your classroom, please describe below the tasks that are primarily your responsibility in the classroom.

13. Again, if you work with other teachers, aides, or adults in your classroom, please describe those things that are primarily their responsibility.

14. Below is a list of some of the ways teachers and aides work together in the classroom. Check whether or not each item describes a way you work with your aide(s).

YES NO

- | | | |
|-------|-------|--|
| _____ | _____ | 1. We plan together for scheduling trips and parties. |
| _____ | _____ | 2. We plan together what to teach the children |
| _____ | _____ | 3. We don't have equal time for lunch, breaks, etc. |
| _____ | _____ | 4. We don't share equally in cleaning and arranging the room |
| _____ | _____ | 5. We usually use the same methods for teaching |
| _____ | _____ | 6. We agree on how much discipline to have in the class |
| _____ | _____ | 7. We don't tell each other what is really bothering us |
| _____ | _____ | 8. We talk to each other about the problems that children are having |
| _____ | _____ | 9. We both know what is expected of us |

CCEP Teacher Survey

4

15. How often, in an average month, is your classroom visited by either a supervisor, advisor, or consultant? Circle the number of times that you think best represents the average number of such visits.

0 1 2 3 4 5 6 7 8 9 10 'More than 10'

16. Have you ever asked for help from a supervisor or advisor that required his observing in your classroom?

yes _____ no _____

17. How many times in an average month, would you say that you ask a supervisor, advisor, or helping teacher to talk with you about some school-related issue? Circle the number that you think best represents the approximate average.

0 2 4 6 8 10 12 14 16 18 '20 or more'

18. What do you think the administration of Follow Through looks for when they observe your classroom? Please circle the number beside each item that best represents how important you think that criterion is to the administration for the judgments they make about your teaching.

	<u>Not Important</u>	<u>Somewhat Important</u>	<u>Important</u>	<u>Very Important</u>
1. Your ability to maintain an orderly classroom	1	2	3	4
2. The enthusiasm the children show in their work	1	2	3	4
3. Evidence of children's learning in the classroom	1	2	3	4
4. Your following closely a prescribed lesson plan or set of materials	1	2	3	4
5. An overall estimate of the competence of your teaching	1	2	3	4
6. Improvement in a specific teaching method or subject	1	2	3	4

19. Are you satisfied that the standards used to evaluate your teaching are in fact the proper standards that should be applied to you? Circle the number beneath the description that best represents how you feel about this.

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Slightly Satisfied</u>	<u>Slightly Dissatisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4	5	6

20. IF you feel that the standards used to evaluate your teaching are improper please describe in your own words what other standards you feel should be substituted.

21. In general, how considerate do you feel that the administration of Follow Through is towards you? Circle the number below the description that best represents how you feel about this.

The administration is:

<u>Very Considerate</u>	<u>Considerate</u>	<u>Not Considerate</u>	<u>Very Inconsiderate</u>	<u>I'm not sure</u>
1	2	3	4	5

22. Do you prefer to develop materials for use in your classroom or to use the materials of curriculum specialists? Check one of the following.

I prefer: _____ to develop materials for my classroom

_____ to use the materials of the curriculum specialists

_____ I have no preference

_____ It depends (Please state briefly what it depends on)

23. What type of records are kept about your performance as a teacher? Please check each category that applies, and add in the spaces provided a description of any additional records that are kept.

_____ No record

_____ General impressions of a supervisor

_____ Detailed recording of how you handle children and employ materials

_____ Videotaping

_____ Other (please specify) _____

_____ I don't know

24. How often, on the average, are records made of your teaching performances? Circle the number beside the description that you think best represents the average.

<u>1</u> Less than once a year	<u>6</u> Once every two months
<u>2</u> Once a year	<u>7</u> Once a month
<u>3</u> Twice a year	<u>8</u> Once every two weeks
<u>4</u> Three times a year	<u>9</u> Once a week
<u>5</u> Four times a year	<u>10</u> More than once a week

25. What is done with the records that are made of your teaching performance? Please check each category that applies.

The records about my teaching performance are:

☐ Shared with me

☐ Kept private

☐ Made public to teachers and staff

☐ Made public to staff and parents

☐ Used to suggest improvements to me

☐ Used to evaluate and give me a job rating

☐ Used to point up deficiencies in my methods

☐ Other (please specify) _____

26. When and if you disagree with either the observations or evaluations that a supervisor makes of you, how free do you feel to disagree with him? Circle the number next to the description that best describes how you feel about this.

1 I feel very free to disagree

2 I feel free to disagree but not very free

3 I don't really feel free to disagree

4 I don't feel free to disagree at all

5 I'm not sure

6 The situation has never arisen

27. Do you have any friends on the staff of your school or program that you see socially outside of school?

yes _____ no _____

28. If you had an idea about how the curriculum might be improved, how free would you feel to suggest a change to your supervisor?

- 1 I would feel free to suggest a change
- 2 I would feel free to suggest a change, but not very free
- 3 I would not feel free to suggest a change
- 4 The situation has never arisen

29. Below is a list of some common concerns of teachers. Next to each item circle the number beneath the names of the people that you normally talk to about that concern:

THE PEOPLE YOU TALK WITH					
	Principal or Director	Helping Teacher + Advisor	Other Teachers	the aide(s) you work with	Children's Parents
1. Problems of individual children and family life	1	2	3	4	5
2. Questions about children's schoolwork	1	2	3	4	5
3. Personal feelings about yourself and your job	1	2	3	4	5
4. Opinions about Follow Through	1	2	3	4	5
5. Feelings and opinions about the aide(s) you work with	1	2	3	4	5

30. What single thing do you like best about your job as a teacher this year?

31. How do good teachers, in your opinion, gauge the effectiveness of their teaching? Which three of the following is the good teacher most likely to rely on as indications (circle the number beside the three most important)

- 1 The reactions of other teachers who know their work and their students
- 2 The opinions expressed by students generally
- 3 Their general observations of students in light of their own conception of what should be learned
- 4 The assessments made by the principal or the program director
- 5 The assessments made by a special supervisor or similar person
- 6 The results of objective examinations and other tests
- 7 The reactions of students' parents
- 8 Other criteria (please specify) _____

32. Look over the above list again. What is the number of the item that you think is most important to good teachers in gauging their effectiveness?

1 2 3 4 5 6 7 8

33. Pupils learn many things in elementary school. Please circle the number beside each item that best represents how important you feel each of the follow is.

	<u>Very Important</u>	<u>Quite Important</u>	<u>Somewhat Important</u>	<u>Not too Important</u>	<u>Not at all Important</u>
1. Pupils learn reading skills	1	2	3	4	5
2. Pupils learn to set rules for their own behavior	1	2	3	4	5
3. Pupils learn to relate their learning to their personal interests	1	2	3	4	5
4. Pupils learn to listen and follow directions	1	2	3	4	5
5. Pupils learn the facts covered in the curriculum	1	2	3	4	5
6. Pupils learn to be creative in their work	1	2	3	4	5
7. Pupils learn to follow rules that apply to the whole class	1	2	3	4	5

34. What is the number of the item above that you think is the most important thing pupils learn in elementary school?

1 2 3 4 5 6 7

35. What are your feelings about the educational value of the Bank Street Bushell Gotkin Becker-Engelmann program in your school?

36. How satisfied are you with the relations between yourself and the children in your classroom this year?

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Slightly Satisfied</u>	<u>Slightly Dissatisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4	5	6

37. Below are some statements about conditions in your school. Circle the number beside each item that best represents the extent to which you agree that the item is a true description of conditions in your school.

	<u>Agree Strongly</u>	<u>Agree</u>	<u>Not Sure</u>	<u>Disagree</u>	<u>Disagree Strongly</u>
1. The school principal generally supports the Follow Through program	1	2	3	4	5
2. Follow Through teachers here are a separate group from the rest of the school's teachers	1	2	3	4	5
3. The whole school must operate as a unit or each classroom will suffer	1	2	3	4	5

38. How many of the parents of the children in your class have you seen in conference during the past four months?

I have seen the parents of _____ children.

39. In your opinion, how important a contribution to the running of Follow Through does the parents' organization make? Circle the number beneath the best description of the parents' contribution.

The parents' contribution is:

<u>Very Important</u>	<u>Quite Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>I don't know</u>
1	2	3	4	5

40. In general, how satisfied would you say you are with the relations between yourself and the parents of the children in your classroom? Circle the number beneath the description that best represents how you feel about this.

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Slightly Satisfied</u>	<u>Slightly Dissatisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4	5	6

41. Below are some statements reflecting some common opinions about education. Please circle the number beside each statement that best represents the extent of your agreement or disagreement with that statement.

	<u>Strongly Agree</u>	<u>Mildly Agree</u>	<u>Mildly Disagree</u>	<u>Strongly Disagree</u>	<u>Don't Know</u>
1. There is too great emphasis on keeping order in the classroom	1	2	3	4	5
2. Pupils are motivated to do better work when they feel free to move around the room while the class is in session	1	2	3	4	5
3. A child's teacher has a clearer picture of what the child needs in school than does the parent	1	2	3	4	5
4. A principal should supervise his teachers closely enough to make sure their teaching meets his standards	1	2	3	4	5
5. Children should be given more freedom in the classroom than they normally get	1	2	3	4	5
6. The effective teacher has complete control of the learning situation at all times	1	2	3	4	5
7. Children need and should have more supervision and discipline than they usually get	1	2	3	4	5
8. The responsibility for a child's progress in school rests squarely on the classroom teacher	1	2	3	4	5
9. When given a choice of activity, pupils generally select what is best for them	1	2	3	4	5
10. A firm hand by the teacher promotes emotional security for pupils	1	2	3	4	5
11. Pupils must be kept busy or they soon get into trouble	1	2	3	4	5

42. Overall, considering all aspects of your job as a teacher this year, how satisfied would you say your are?

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Slightly Satisfied</u>	<u>Slightly Dissatisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4	5	6

43. Do you plan to be teaching in the same school or program next year?

____ Yes, definitely

____ Probably

____ Probably not

____ Definitely not

____ Other (Please specify) _____

44. What sex are you? Female _____ Male _____

45. What is your marital status?

____ Single

____ Married

____ Separated or Divorced

____ Other

IF YOU ARE NOT MARRIED, SKIP TO QUESTION 47.

46. What is your spouse's occupation. Please give his/her job title and a brief description of what he/she actually does.

47. What is or was your father's main occupation? Please give his job title and a brief description of what he actually does or did.

48. Are you....

_____ Black

_____ White

_____ Oriental

_____ Puerto Rican

_____ Other (Please specify) _____

49. What is the highest degree or certificate you have earned?

50. Did you earn your Bachelor's degree (if you have one) at a school that was primarily a school for education?

yes _____ no _____

51. This space is provided for you to make any comments about your school or program that you feel are relevant and have not yet been raised. We would also welcome any comments about this questionnaire.

THANK YOU FOR YOUR HELP. WE WILL TRY TO USE THE RESULTS TO IMPROVE EDUCATION

1. What grade (or grades) do you teach? _____
2. What is the name of your school? _____
3. For how many years have you been a classroom aide? _____
4. For how many years have you worked as an aide in Follow Through? _____
5. How did you hear about the job you now hold as a classroom aide?

6. Here is a list of the ways that teaching aides learn to do their jobs.
Check each way that was important to you in learning your job.
☐ 1. The training sessions before you began work
☐ 2. The help you got from other aides
☐ 3. The help you got from the teacher(s) you work with
☐ 4. Remembering how you were taught when you were a pupil
☐ 5. Watching how children acted when you tried new things
☐ 6. Advice to you from Follow Through supervisors
☐ 7. After school staff meetings
☐ 8. Your experience as a parent
☐ 9. Other things (please write them in below)

7. How many children are officially enrolled in your class? _____
8. How many teachers and aides normally work in your classroom?
____ Teachers _____ Aides
9. What is your job called (title)? _____

10. Check each activity in the following list that you normally do as part of your job as a classroom aide.

- ☐ 1. Teaching the whole class by yourself
- ☐ 2. Keeping records, for example taking attendance
- ☐ 3. Grading students papers
- ☐ 4. Teaching a small group
- ☐ 5. Cleaning and arranging the room
- ☐ 6. Talking with parents
- ☐ 7. Talking and planning with the teacher
- ☐ 8. Working with an individual child
- ☐ 9. Walking pupils in halls, to lunch, home, etc.
- ☐ 10. Watching the class while the teacher is teaching

11. Look over the above list again. Write in below the numbers of the four activities that you usually spend the most time on.
-

12. Below is a list of some of the ways that teachers and aides work together in the classroom. Check whether or not each item describes a way you work with your teacher(s).

YES NO

- ☐ ☐ 1. We plan together for scheduling trips and parties
- ☐ ☐ 2. We plan together what to teach the children
- ☐ ☐ 3. We don't have equal time for lunch
- ☐ ☐ 4. We don't share equally in cleaning and arranging the room
- ☐ ☐ 5. We usually use the same methods for teaching
- ☐ ☐ 6. We agree on how much discipline to have in the class
- ☐ ☐ 7. We don't tell each other what is really bothering us
- ☐ ☐ 8. We talk to each other about the problems that children are having
- ☐ ☐ 9. We both know what is expected of us

13. How satisfied are you with the way you and the teacher(s) work together in your classroom? Circle the number beneath the best description of how satisfied you are with this.

<u>Very</u> <u>Satisfied</u>	<u>Satisfied</u>	<u>Slightly</u> <u>Satisfied</u>	<u>Slightly</u> <u>Dissatisfied</u>	<u>Dissatisfied</u>	<u>Very</u> <u>Dissatisfied</u>
1	2	3	4	5	6

14. How many times in a month is your teaching observed by a Follow Through advisor, consultant, or supervisor?
- _____

15. Which people in your school are supposed to give you help and advice about how to do your job? Please give their job titles, not their names.
- _____

16. Have you ever asked an advisor, consultant, or supervisor for help that required someone's observing your work in the classroom?

yes _____ no _____

17. How many times in the past four weeks have you asked a supervisor, advisor, or consultant to talk with you about a question you had about your job?

_____ times in the past four weeks.

18. What do you think the administration of Follow Through looks for when they observe your work? Circle the number beside each item that you think best represents how important that item is to the administration for the judgments they make about your work.

	<u>Not</u> <u>Important</u>	<u>Important</u>	<u>Very</u> <u>Important</u>
1. Your ability to keep the children orderly	1	2	3
2. The enthusiasm the children show in their work	1	2	3
3. Your following closely some prepared materials	1	2	3
4. Evidence that the children are learning	1	2	3
5. A general impression of how well you do your job	1	2	3
6. Improvement in a specific aspect of your work	1	2	3

19. Do you think the administration is looking for the right things when they observe your work?

yes _____ no _____

20. IF you think the administration is looking for the wrong things, what different standards do you think should be used?

21. In general, how considerate do you feel that the administration of your program is towards you? Circle the number beneath the best description of how you feel about this. The administration is:

<u>Very considerate</u>	<u>Considerate</u>	<u>Not Considerate</u>	<u>Very Inconsiderate</u>	<u>I'm not sure</u>
1	2	3	4	5

22. What type of records are kept about your performance as a classroom aide? Check all the categories that apply.

☐ No record

☐ The general impressions of a supervisor

☐ Detailed records of how you handle children and use materials

☐ Videotaping

☐ Other (please specify) _____

☐ I don't know

23. Suppose you disagree with either the observations or evaluations that a supervisor makes of you, how free do you feel to disagree with him? Circle the number next to the best description of how you feel about this.

☐ 1 I feel very free to disagree

☐ 2 I feel free to disagree, but not very free

☐ 3 I don't really feel free to disagree

☐ 4 I don't feel free to disagree at all

☐ I'm not sure

☐ The situation has never arisen

24. If you had an idea how the curriculum might be improved, how free would you feel to suggest a change to your supervisor?

- 1 I would feel very free to suggest a change
2 I would feel free to suggest a change, but not very free
3 I would not feel free to suggest a change
4 The situation has never arisen

25. Do you have friends on the Follow Through staff that you see socially outside of school?

yes _____ no _____

26. Below is a list of some common concerns of classroom aides. Next to each item circle the number beneath the names of the people you normally talk to about that concern.

CONCERNS	THE PEOPLE YOU TALK WITH				
	Principal or Program Director	Helping teacher or advisor	The teacher you work with	Other classroom Aides	Children's Parents
1. Problems of individual children and family life	1	2	3	4	5
2. Questions about children's schoolwork	1	2	3	4	5
3. Feelings and opinions about the teacher you work with	1	2	3	4	5
4. Personal feelings about yourself and your job	1	2	3	4	5
5. Opinions about Follow Through	1	2	3	4	5

27. What single thing do you like best about your job as a classroom aide this year?

28. How do good teaching aides know they are doing a good job? Circle the numbers beside the three methods listed below that good teaching aides rely on most.

- 1 The reactions of other teaching aides who know their work and their students
- 2 The opinions expressed by students
- 3 Watching how children react to subjects that the aide decides should be taught
- 4 The opinions of the Follow Through staff
- 5 The opinions of the teacher they work with
- 6 The results of tests the children take
- 7 The reactions of parents
- 8 Other criteria _____

29. Look over the above list again. What is the number of the item that you think is most important to good teaching aides for knowing how good a job they are doing?

1 2 3 4 5 6 7 8

30. Here is a list of things children learn in the classroom. How important is each item to you? Please rate each item by checking how important it is.

	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
1. Pupils learn reading skills	_____	_____	_____
2. Pupils learn to set rules for their own behavior	_____	_____	_____
3. Pupils learn to listen and follow directions	_____	_____	_____
4. Pupils learn the facts covered in the curriculum	_____	_____	_____
5. Pupils learn to apply their learning to their interests	_____	_____	_____
6. Pupils learn to be creative in their work	_____	_____	_____
7. Pupils learn to follow rules that apply to the whole class	_____	_____	_____

31. Which one of the above items do you think is the most important thing children learn in elementary school? Circle one number.

1 2 3 4 5 6 7

32. Are you the parent of a child who is or has been a student in Follow Through?

_____ YES (if yes, skip to question 34)

_____ NO (if no, do question 33)

33. IF you had a child the right age for Follow Through, would you put him in the program?

_____ yes _____ no

34. What are your feelings about the educational value of Follow Through?

35. Check each category that describes a way that your experience in the community affects your work in Follow Through.

- _____ 1. My racial background is the same as that of most of the children in the program
- _____ 2. I am a parent of a child in the program
- _____ 3. I live in the school neighborhood
- _____ 4. I know what these children must learn in order to "make it"
- _____ 5. I am familiar with the language of the children
- _____ 6. I know what type of discipline is effective with the children in the program
- _____ 7. I talk with the parents of the children in the class
- _____ 8. I represent community interests on a committee
- _____ 9. My community experience does not affect my work in Follow Through at all.

36. In general, how satisfied are you with the relations between yourself and the parents of the children in your class? Circle the number beneath the best description of this.

<u>Very</u> <u>Satisfied</u>	<u>Satisfied</u>	<u>Neutral</u>	<u>Dissatisfied</u>	<u>Very</u> <u>Dissatisfied</u>	<u>No</u> <u>Contact</u>
1	2	3	4	5	6

37. Below are some common opinions about education. Please circle the number beside each statement that best represents the extent of your agreement or disagreement with that statement.

	<u>Strongly Agree</u>	<u>Mildly Agree</u>	<u>Mildly Disagree</u>	<u>Strongly Disagree</u>	<u>Don't Know</u>
1. A child's teacher has a clearer picture of what the child needs in school than does his parent	1	2	3	4	5
2. Children should be given more freedom in the classroom than they normally get	1	2	3	4	5
3. A principal should supervise his teachers closely enough to make sure their teaching meets his standards	1	2	3	4	5
4. The effective teacher has complete control of the learning situation at all times	1	2	3	4	5
5. When given a choice of activity pupils generally select what is best for them	1	2	3	4	5
6. Pupils must be kept busy or they soon get into trouble	1	2	3	4	5

38. How satisfied are you with the relations between yourself and the children in your classroom this year?

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4

39. Overall, how satisfied are you with your job as a classroom aide this year?

<u>Very Satisfied</u>	<u>Satisfied</u>	<u>Dissatisfied</u>	<u>Very Dissatisfied</u>
1	2	3	4

40. Do you plan to be working in Follow Through next year?

☐ yes, definitely ☐ probably not
☐ yes, probably ☐ definitely not
☐ Other (please specify) _____

41. What sex are you?

Female _____ Male _____

42. What is your marital status?

_____ Single

_____ Married

_____ Separated or Divorced

_____ Other

IF YOU ARE NOT MARRIED, SKIP TO QUESTION 44.

43. What is your spouse's occupation? Please give his/her job title and a brief description of what he/she actually does.

44. What is or was your father's occupation? Please give his job title and a brief description of what he actually does or did.

45. Are you...

_____ Black

_____ White

_____ Oriental

_____ Puerto Rican

_____ Other _____

46. What is the highest grade or educational level you have completed?

47. This space is provided for you to make any comments about your school or program that you feel are relevant and have not yet been raised. We would also welcome any comments about this questionnaire.

THANK YOU FOR YOUR HELP. WE WILL TRY TO USE THE RESULTS TO IMPROVE EDUCATION